

PSYCHOLOGICAL ABSTRACTS

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GENERAL

(incl. Statistics)

3772. Bentley, M. Cornell studies in dynasomatic psychology. *Amer. J. Psychol.*, 1938, 51, 203-224.—The author outlines the general program of research undertaken by himself and his students over a period of years. All of this program attempts to approach psychological problems operationally. The three trends which were particularly studied were: (1) the importance not only of formal, but also of occasional and self-instruction; (2) the emphasis on the functional mode, i.e., the processes of search, anticipation, etc.; and (3) the investigation of the principles of Gestalt. Particularly it was desired to trace the relationship between perceiving and thinking, which have proved to possess intermediate forms. Theoretically these studies have led the author to discard the concept of experience and to make the psychological functions co-ordinate with the physiological. The concept of environment is found to be a special case of text and context; the integrated system of psychological functions which was developed "sketched in 11 provisional classes of functional products which issue from the various exercise of the functions."—D. E. Johannsen (Skidmore).
3773. Bentley, M. Retrospect and prospect. *Amer. J. Psychol.*, 1938, 51, 357-360.—The author summarizes the contributions made by a group of recent studies directed by him to the understanding from the psychological side of the higher processes. The importance of the trained experimenter in such work is emphasized. Remaining gaps in knowledge are briefly mentioned.—D. E. Johannsen (Skidmore).
3774. Boring, E. G. The Society of Experimental Psychologists: 1904-1938. *Amer. J. Psychol.*, 1938, 51, 410-423.—An historical summary of the informal group of psychologists originally called together annually by Titchener's personal invitation. After Titchener's death the group organized somewhat more formally, drawing up a set of by-laws and a systematic plan for election of members. Present members and fellows and the by-laws are given.—D. E. Johannsen (Skidmore).
3775. Canady, H. G. Psychology in negro institutions. *J. Negro Educ.*, 1938, 7, 165-171.—An examination of 47 institutions by the questionnaire method revealed that only 30% have departments of psychology and only 4 offer an undergraduate major. Only one department has a laboratory. The article lists courses and their frequency of presentation, laboratory and library facilities, and appropriations for the latter. Information concerning the training of the instructors is included.—W. E. Walton (Nebraska).
3776. Chapman, R. M. William Alanson White, M.D. (1870-1937). *Psychiatry*, 1938, 1, 1-5.—Obituary.—M. Grotjahn (Menninger Clinic).
3777. Dallenbach, K. M. Henry Herbert Donaldson: 1857-1938. *Amer. J. Psychol.*, 1938, 51, 434-435.—D. E. Johannsen (Skidmore).
3778. Datta, A. Obituary of Miss Swarnalata Ghosh, late headmistress of Baripada Girls' School, at Mayurbhanji. *Indian J. Psychol.*, 1937, 12, 197.—L. A. Averill (Worcester Teachers College).
3779. Delgado, H., & Trelles, J. O. [Eds.] *Revista de neuro-psiquiatria*. Lima, Peru: S. A. Prensa, Banquijano 745. Vol. 1, No. 1, 1938. Quarterly.—R. R. Willoughby (Brown).
3780. Dryjski, A. *Mózg i dusza*. (The brain and the mind.) Warsaw: Biblioteka Wiedzy, 1938. Pp. 288.—History, methods, results, and criticism of the problems of localizing psychological functions in the brain.—S. Blachowski (Poznań).
3781. Dunham, A. M., Jr. The concept of tension in philosophy. *Psychiatry*, 1938, 1, 79-120.—In all philosophy there appear to be three fundamental laws: The first is the *principle of originality*, meaning that everything which has being is simply itself and no other thing; the *principle of polarity* means that everything which exists depends for its being on the existence of what it is not; and the third principle is the *principle of sufficient reason*, that for everything existing there is a sufficient reason why it is what it is, and why it is not what it is not. The principle of polarity has two "roots," namely, the principle of polarity in direction and the principle of polarity in opposition. Both roots are phenomenologically centered in the experience of tension. The conception of tension is employed in an investigation of "process and futurity." After this the author gives some aspects of his psychology of tension, discussing the opinions of other philosophers (Santayana, Peirce).—M. Grotjahn (Menninger Clinic).
3782. Elmgren, J. Några psykologiska metod-synpunkter. (Some psychological methodological viewpoints.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 73-89.—A historical and critical treatise on the viewpoints and methods of all psychological schools from Wundt up to the present. Trying with Piéron and Guillaume to reconcile all viewpoints, the writer arrives at the following: "Under the supposition that language and the inner data of consciousness are also taken into account, psychology may be defined as the science of behavior in all its changing phases." References in

footnotes.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3783. **Eriksen, R.** *Filosofi og psykologi*. (Philosophy and psychology.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 1-9.—A general treatise on the relationship between philosophy and psychology. As a method unique to philosophy, the author refers to the method of reduction of Sigwart, as opposed to the induction of the natural sciences and the purely mechanical deduction. Reduction consists in concluding from consequences to their antecedents or premises. While psychology, like all other natural sciences, is an inductive empirical science, it is in a peculiar position in regard to the experiential data which constitute its material. Psychology is also an explanatory science, and as such is in a contradictory relation to natural science. This explains why psychology was so long a part of philosophy. In regard to the relationship of psychology to the characteristic philosophical method of reduction, there should also be a psychological reduction, but the two should be kept apart. In all spheres where philosophical reduction is needed, psychological reduction must follow, and philosophical reduction has its problems everywhere where psychology works. "Without understanding of logic, no one can work with the psychology of thought."—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3784. **Essen, J. v.** *Psychologie in het jaar 1937*. (Psychology in the year 1937.) *Ned. Tijdschr. Psychol.*, 1938, 5, 464-479.—In its attempt to avoid metaphysics, psychology has continued to ignore the real nature (as distinguished from the functioning and measurable aspects) of mind and mental phenomena. It has come no closer to a solution of the mind-body relation, which need not lead to fantastic speculations, but requires dialectics of a higher order, and should be the central problem of this discipline.—*H. Beaumont* (Kentucky).

3785. **Esser, P. H.** *Kierkegaard en de "existentieele" psychologie*. (Kierkegaard and existential psychology.) *Ned. Tijdschr. Psychol.*, 1938, 5, 335-363.—The development of the modern existential concept is traced from Socrates through Pascal to Kierkegaard, who was first to emphasize the subjective and time aspects in psychology and to consider individual development as existential growth. Through these aspects and its dynamic character, his system is distinguished from physiological, experimental, static, and reflexive psychologies. Individual development, with its dynamic processes of integration and disintegration, is contrasted with "unavoidable" growth. There is no continuous progress from one developmental stage to the next, and each new stage involves an element of chance. This entails psychic suffering, fear, and inability to relinquish the older structure. Free volition is inherent in individual mental life, while existence gains its significance through experience and activity rather than through thought processes. It can be communicated indirectly only, expresses itself in

overt behavior, and is hindered in its development by the existence of reflexes. Empathy and symbolic identification are techniques used in existential psychology, which has had considerable influence on many recent psychological systems.—*H. Beaumont* (Kentucky).

3786. **Fearon, A. D.** *The two sciences of psychology*. New York: Prentice-Hall, 1937. Pp. xiii + 320. \$2.50.—In an attempt "to meet the need for a correlation of important teachings of experimental (physical) and philosophical (metaphysical) psychology" the "science of human mental behavior and human nature" is introduced and explained from the Scholastic viewpoint. Presumed aspects of the psychological problem (*mentological* and *egological*) are considered both separately and with attention to their interdependence. Contents include discussions of: the basis and divisions of science; physical and metaphysical psychology compared; cognitive powers of the mind (the senses, imagination, intelligence, reason, consciousness, etc.); appetitive powers of mind (desire, feeling, emotion, will, etc.); mental habits (attention, association, memory, reason, character, etc.); the substance "man" (matter, form, intellect, will, etc.); the human soul (spirituality, creation, and immortality of the soul); and the origin and purpose of the species "man" (evolution, creationism, the person, and personal purpose). A synopsis is appended.—*D. G. Ryans* (William Woods College).

3787. **Flores, A.** *Dialectics and the sciences, a bibliography*. *Dialectics*, n.d., No. 3, 30-31.—A bibliography of 35 titles, listing "works dealing with the application of dialectics to astronomy, biology, mathematics and physics."—*I. L. Child* (Yale).

3788. **Flores, A.** *Psychology and Marxism, a bibliography*. *Dialectics*, n.d., No. 4, 21-24.—An introductory note points out that certain ideas in the works of Marx and Engels have served for the foundation of an historical materialist approach to psychology. Recent publications of relevance include not only general discussions of this approach, but also discussions of the relation between Marxist and Freudian theory and of psychological research in the Soviet Union. A bibliography of 45 titles is presented.—*I. L. Child* (Yale).

3789. **Good, P.** *A standardized apparatus for testing the visual acuity of the preschool child*. *Arch. Ophthalmol.*, Chicago, 1938, 19, 253-277.—The apparatus described consists of a flash-light fitted with a bulb to give a uniform illumination of 10 f-c., and seven interchangeable celluloid disks which fit over the light. Each disk bears a Snellen E. The letters are so designed that recognition of their positions indicates acuities of 20/100 through 20/15, respectively.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3790. **Gurnee, H.** *A portable bolthead maze*. *Amer. J. Psychol.*, 1938, 51, 405-406.—*D. E. Johannsen* (Skidmore).

3791. **Hadley, E. E.** [Secretary of Publications Committee.] *Psychiatry, journal of the biology*

and the pathology of interpersonal relations. Washington, D.C.: William Alanson White Psychiatric Foundation. Vol., No. 1, February 1938. Quarterly. \$6.00 per volume.—R. R. Willoughby (Brown).

3792. Harlow, R. F. Philosophy's contribution to Gestalt psychology. *J. Psychol.*, 1938, 5, 185-200.—The writer points out that the foundation pattern of Gestalt theory is philosophy, that it derives from the monadology of Leibnitz, that it is in line with the philosophical view which fuses the variations in appearance into final unity, and "that modern physicists are just coming abreast of this position when they discover laws and procedures which enable them to prove to their satisfaction the unitary force which controls the laws of science."—J. McV. Hunt (Brown).

3793. Harms, E. Psychologie und Philosophie. (Psychology and philosophy.) *Ned. Tijdschr Psychol.*, 1938, 5, 433-463.—Because of its emphasis on measurement and experimentation, modern psychology has become inimical to scientific theorizing. Yet even the experimental problems and techniques of behaviorism involve philosophical speculation, since they are based on the philosophical tenets of mathematics, physics, and physiology. In common with all other special fields, psychology uses the basic elements of general scientific theory in its methods, categories, and systems. Psychology has used many techniques which were derived from other sciences, each of which had its limitations, and which must ultimately be subordinated to a truly psychological autonomy. The specific contributions of psychology to other disciplines lie in its philosophical and metaphysical aspects. Facts discovered by modern autonomistic psychologists develop new concepts and values which transcend the boundaries of the psychological field. The philosophical implications of psychiatric research have opened up an entirely new field for philosophy, as have many pedagogical investigations. Psychology is closely intertwined with other specialized sciences and with philosophy, and can influence these more definitely in those respects in which it has developed a methodology of its own.—H. Beaumont (Kentucky).

3794. Holzinger, K. J. General methods: statistical analysis and comparison. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 293-306.—The quality of statistical investigations has improved markedly in the last ten years. Although the distinction is not sharp, the experimental and statistical methods may be considered as different aspects of a common quantitative method. From an historical and evaluative viewpoint the author discusses the normal curve, moments, percentiles, correlation, the method of least squares, and factor analysis.—P. S. de Q. Cabot (Simmons).

3795. Husson, R. Les méthodes statistiques en psychologie. (Statistical methods in psychology.) *J. Soc. Statist., Paris*, 1936, 76, 1-31.—The author feels that the mathematical apparatus applied to psychology is far in advance of the degree of precision in techniques of measurement, and that there-

fore effort ought to be directed to the perfecting of the psychometric technique. He further feels that direct investigation would permit dispensing with statistics entirely.—(Courtesy *Année psychol.*).

3796. Jaensch, E. Die Erneuerung der Ethik und die Psychologie. (The rejuvenation of ethics and psychology.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 59-72.—A general treatise discussing the following subtopics: philosophy and psychology; Kant, the everlasting in his moral philosophy and the necessity of going beyond this; the problem of authenticity; the problem of *Eudæmonismus*; rejuvenation of humanity and care of the spirit of youth.—M. L. Reymert (Mooseheart Laboratory for Child Research).

3797. Jeffreys, H. Maximum likelihood, inverse probability, and the method of moments. *Ann. Eugen., Camb.*, 1938, 8, 146-151.—Jeffreys points out that in a consistent theory of induction involving apparently the minimum number of independent postulates, the principle of inverse probability arises as a theorem, of which maximum likelihood is a very accurate consequence. He points out that the main argument for the Pearson type curves is that they contain the minimum number of additional parameters needed to express skewness and an excess or deficiency of observations at the extremes, but that what is needed is a compendium of actual results showing how frequent such departures are and how well the Pearson forms succeed in expressing them.—J. W. Dunlap (Rochester).

3798. Kelly, G. A. The assumption of an originally homogeneous universe and some of its statistical implications. *J. Psychol.*, 1938, 5, 201-208.—Accepting Spencer's definition of evolution, which implies that the universe is originally an "indefinite, incoherent homogeneity," and that all variables are emergent, the writer points out that, therefore, all sample populations must be considered as selected on the basis of the definition of the emergent variable measured, and that the coefficient of correlation between any two variables is simply a measure of the homogeneity remaining in that function of the universe which they jointly represent. Thus any correlation should be accompanied by a statement of the absolute dispersion allowed each variable by its definition and basis of selection, and that a "discovered" factor's "operativeness" (factor analysis) may be altered entirely by a more liberal definition of some of the measured variables.—J. McV. Hunt (Brown).

3799. Koos, L. V. The specific techniques of investigation: observation, questionnaire and rating. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 375-390.—The writer discusses various types of observation and the areas in which observation is used. The interview and ratings are dealt with as forms of the questionnaire method and several valuable studies involving the use of the questionnaire are mentioned. Questionnaires are discussed from the standpoint of vocational guidance and of personality adjustments. The graphic rating scale is considered

and (as in the case of the questionnaire) references are made to bibliographies.—*P. S. de Q. Cabot* (Simmons).

3800. **Krimsky, E.** Some newer developments in precision type stereoscopes. *Arch. Ophthalm., Chicago*, 1938, 19, 394-402.—The author describes an elaborate modification of the stereoscope permitting adjustment for considerable degrees of squint and providing for accurate measurements of fusion amplitudes with different types of targets. A simpler model is designed as a calibrated home-training instrument.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3801. **Landmark, J.** Kausalitet og ansvarspsykologi. (Causality and responsibility psychology.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 46-58.—A general philosophical discussion, with examples also from contemporary science, on the causality principle and purposive behavior.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3802. **Langenbeck, B.** Das elektroakustische Hörprüfungs- und Hörverbesserungsgerät. (Electro-acoustic apparatus for the examination and improvement of hearing.) *Z. Hals-Nas.- u. Ohrenheilk.*, 1937, 40, 201-277.—Besides the artificial ear-drum, the intensification of sounds is the only useful principle for the construction and improvement of hearing. The fundamental conditions of such constructions are described. The use of such apparatus is limited to cases in which the labyrinth is damaged. In cases of degeneration of the ear nerves the physician must avoid too strong an intensification of sound.—*P. L. Krieger* (Leipzig).

3803. **Mitra, S. C.** History of the psychology department of the University of Calcutta. *Indian J. Psychol.*, 1937, 12, 151-162.—The author traces the history of this department during the twenty years that it has been in existence. The first master's degree was awarded to M. N. Banerji in 1916 and the first doctorate to G. Bose in 1921. Mitra explains the existing syllabus in psychology, traces the progress of the department, and defines the relation of the department's work and the Indian Science Congress, the Indian Psychological Association, the Indian Psychoanalytic Society, and the Indian Association for Mental Hygiene. He outlines proposed expansions and notes some handicaps of the department.—*L. A. Averill* (Worcester Teachers College).

3804. **Niceforo, A.** A proposito di psicogrammi dei delinquenti e sul metodo del "profilo grafico." (On the psychogram of delinquents and the method of the "graphic profile.") *Giust. penal.*, 1936, 42, No. 3, 1-11.—The author suggests that graphic profiles be represented by marks in 5 columns corresponding to a grouping made according to a preliminary division into centiles.—(Courtesy *Année psychol.*).

3805. **Rabaud, E.** Psychologie animale et finalité. (Animal psychology and finality.) *J. Psychol. norm. path.*, 1937, 34, 305-324.—The author discusses

various Hymenoptera with respect to the way they capture their prey, the method of disposition of their larvae, etc., in order to exemplify different types of psychological methodology. He feels that objective analysis unencumbered by too many hypotheses is the only correct procedure in animal psychology.—*R. E. Perl* (New York City).

3806. **Richter, F.** Beitrag zur Technik der Registrierung bioelektrischer Potentiale mit der Braunschen Röhre. (Contribution to the technique of recording bio-electric potentials by means of vacuum tubes.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 111-136.—The utility of direct-current and alternating-current amplifiers in electro-biological investigation is discussed. A modified direct-current amplifier is described which may be used for a much wider variety of electro-biological investigations than either the conventional D.C. or A.C. amplifier.—*M. A. Rubin* (Worcester State Hospital).

3807. **Rider, P. R.** Survey of the theory of small samples. New York: Nordemann Publ. Co., 1938. Pp. 52. \$1.00.—*R. R. Willoughby* (Brown).

3808. **Ross, R. T.** A simple Hollerith technique for scoring tests. *Amer. J. Psychol.*, 1938, 51, 409.—*D. E. Johannsen* (Skidmore).

3809. **Ruch, F. L., & Warren, N.** Working with psychology. New York: Scott, Foresman, 1938. Pp. 214. \$1.00.—This is a guidebook for use with Ruch's *Psychology and Life* and other texts. On each of 18 topics the reader is given a list of references, a brief objective self-test, one or two group experiments, and a series of questions for individual study.—*W. S. Hunter* (Brown).

3810. **St. Kruk, W.** Sprawozdanie z XI międzynarodowego kongresu psychologicznego w paryżu. (Report of the XIth international congress of psychology in Paris.) *Kwart. psychol.*, 1937, 9, 453-457.—*T. M. Abel* (Trade Extension Classes, New York City).

3811. **Sanborn, H.** A side-light on the katharsis. *Classical J.*, 1938, 33, 322-335.—Following an examination of all the existing translations and annotations of a certain passage from Aristotle's *Poetics*, which deals with the problem of whether actors in presenting a given emotion experience the emotion involved, the author concludes that "If . . . Aristotle . . . meant that the aesthetic attitude is one of actual instead of ideal emotion, then it seems that we have the best of reasons for assuming that in his discussion of the *katharsis* the same thing is true, so that he refers there also to real pity and real fear."—*E. D. Hunt* (Brown).

3812. **Smith, G. M.** A simplified guide to statistics. New York: Farrar & Rinehart, 1938. Pp. x + 70. \$0.60.—This pamphlet brings together the more useful statistical tools and concepts for students in general and laboratory courses. The contents include an introduction and chapters on the distribution of scores, measures of central tendency, measures of deviation, the use of norms and grading "on the curve," standard scores for comparing and combining

test results, percentage of a normal distribution between means, and correlation techniques. Tables of areas under parts of the normal curve, of chances in 100 that the true difference between means is greater than zero, and of squares and square roots of numbers from 1 to 1000 are included.—*J. McV. Hunt* (Brown).

3813. Steen, H. *Het lichaam-ziel probleem in de Nederlandsche filosofie in de 19e en 20e eeuw.* (The mind-body problem in the philosophy of the Netherlands in the 19th and 20th centuries.) *Ned. Tijdschr. Psychol.*, 1938, 5, 364-387.—Religion has exercised a great influence on the philosophers of the Netherlands, with the result that materialism has never been seriously considered. In the first half of the 19th century, Schröder indicated as an essential difference between mind and body that the latter cannot originate activity, even within itself, while the mind may become active at will and induce the body to become active as well. Once active, the body may in turn influence mental behavior, but the mind does not depend on the body for its existence. In the second half of that century, Opzoomer influenced psychological thinking. Though he was an empiricist, he could not accept the full consequences of his position. He distinguished five sources of information: sensory perception, pleasure-pain sensations, esthetic appreciation, moral feeling, and religious feeling. Sensory perception provides the elements, which are transformed into general truths by induction. Roorda considered body and mind two aspects of the same thing, holding that the life spark develops gradually and successively into vital force (plants), mind (animals), and spirit (man). Van der Wijck rejected both materialism and dualism and advocated spiritualistic monism, considering mental attitudes the realities behind material objects.—*H. Beaumont* (Kentucky).

3814. Steen, H. *Das Leib-Seele Problem in der Philosophie Hollands in 19. und 20. Jahrhundert. I. Die Behandlung des Leib-Seele Problems in der monistischen Metaphysik.* (The mind-body problem in the philosophy of the Netherlands in the 19th and 20th centuries. I. The treatment of the mind-body problem in monistic metaphysics.) *Ned. Tijdschr. Psychol.*, 1938, 5, 480-515.—Scholten was influenced by Spinoza in many respects (e.g., the identification of God with the universe). His profession (professor of theology) often interfered with his strict adherence to empirical realism. It is not the soul which is immortal, but man himself. Intelligence, i.e., the ability to understand the objective laws of nature and the logic of the universe, is present a priori, but he denied the existence of categorical imperatives (Kant). Heymans attempted to construct a system which would be related to the natural sciences and to psychology as physical chemistry is to physics and chemistry. To do this he assumed the existence of natural laws which embraced all material phenomena to explain physical events, and a similar set of laws to account for mental phenomena. The parallelism between these two is possible because both refer to the same reality, but physical events

can become conscious only through the medium of mental activity. Hence the primacy of mind. This leads to the concept of universal consciousness, of which each individual consciousness forms a part (individuation). The author offers detailed criticism of these interpretations.—*H. Beaumont* (Kentucky).

3815. Szewczuk, W. *Psychologia postaci.* (Psychology of the "Gestalt.") Warsaw: Nasza Księgarnia, 1937. Pp. 231.—A systematic presentation of the problems and present position of Gestalt psychology, which the author enriches by some contributions of his own from the domain of the psychology of memory.—*S. Blachowski* (Poznań).

3816. Tolman, E. C. *Physiology, psychology, and sociology.* *Psychol. Rev.*, 1938, 45, 222-241.—The author believes that the usual hierarchical arrangement of these sciences, with physiology basic to the others, should be reversed, because sociology is "ancillary" [fundamental] to psychology and psychology is "ancillary" to physiology. We cannot study the psychology of the behavior of individuals except within larger sociological wholes, since group conduct, acting as a field, causes interfunctional relations between the psychologist's independent variables, and when functional relations have been studied within one social group they must be restudied in other different types of group, because the variable will have taken on new values. Also any small group of physiological activities is always immersed in a field of wider behavior and will change its character if the psychological field is changed.—*A. G. Bills* (Cincinnati).

3817. Travis, R. C. *A manual pursuit-oscillator.* *Amer. J. Psychol.*, 1938, 51, 406-408.—*D. E. Johanssen* (Skidmore).

3818. [Various.] *Festskrift til Anathon Aall på 70 årsdagen hans 15. August 1937.* (Complimentary volume to Anathon Aall on his 70th birthday, August 15, 1937.) Oslo: Aschehoug, 1937. Pp. 271.—Aall is retiring as professor of philosophy and psychology in the University of Oslo; philosophical and psychological contributions are submitted by former pupils and friends. Aall is also the founder and director of the Psychological Institute of the University. The volume includes a portrait and a complete bibliography.—*M. L. Reymer* (Mooseheart Laboratory for Child Research).

3819. Weida, F. M. *On various conceptions of correlation.* New York: Nordemann Publ. Co., 1938. Pp. 37. \$0.75.—*R. R. Willoughby* (Brown).

3820. Werkmeister, W. H. *The meaning of "meaning" re-examined.* *Phil. Rev.*, N. Y., 1938, 47, 245-266.—Meanings are found only in an experiential context involving a mind which interprets a sign as designating some specific referent. Meanings are distinct from the emotive and evocative uses of words and from the images often associated with words. The process of defining words by means of words cannot be carried on indefinitely. Sooner or later we come to elementary meanings which must be demonstrated in and through im-

mediate experience. Derivative meanings are definitely related to elementary meanings. Whatever is not related to our first-person experience can have no meaning for us. Combinations of words have meaning only if they do not violate the rules of grammar, are free from logical contradictions, and do not mix up various spheres of relevancy. Verifiability is not a criterion of meaning. Not every meaningful proposition is true. Meaning is not identical with a set of operations. Without knowing the meaning of length, the physicist could make no relevant choice of measuring devices.—*M. F. Martin* (West Springfield, Mass.).

3821. Windesheim, K. A. The evolution of speech recording machines. *Quart. J. Speech*, 1938, 24, 257-265.—The history of attempts to record speech is sketched, and the characteristics of apparatus now available are described.—*W. H. Wilke* (New York University).

3822. Wodehouse, H. Language and moral philosophy. *Mind*, 1938, 57, 200-213.—After presenting the thesis that all use of language is both presentative and emotive, at least from the standpoint of the speaker, whether he achieves his intention or not, the author defends certain philosophical disciplines, notably ethics, as having meaning, against Carnap, who takes a different position.—*H. Helson* (Bryn Mawr).

[See also abstracts 3919, 3974, 4001, 4051, 4052.]

NERVOUS SYSTEM

3823. Anokhin, P. K. Problema lokalizatsii motornogo impulsa v tsentralnoi nervnoi sisteme. (The problem of the localization of motor impulses in the central nervous system.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 15-23.—Some results of the author's experiments on nerve anastomosis in mammals are summarized with reference to the questions of the specificity of activity of the motor centers and the course of events connected with the motor stimulus before it reaches the effectors. The specificity of function of spinal motor centers was shown to be changed with alteration of their peripheral connections. Removal of the motor area of the brain after successful cross anastomosis of motor nerves was followed by flaccidity of the corresponding crossed extremity, demonstrating participation of the cortex in the process of restitution. Such participation, however, is limited. If the vagus is severed beyond the origin of n. recurrens following a vagus radialis anastomosis no rhythmic contractions are shown by the front extremity, showing that the motor impulse is strictly localized and failing to confirm Weiss's theory of diffuse spreading of the motor impulse within the central nervous system. Precise localization and high specificity for afferent stimuli were demonstrated by a recurrens-radialis anastomosis; slight scratching of the skin of the front leg resulted in coughing; this failed to occur if the anastomosis was effected below the origin of the

recurrent nerve. Other experiments lead the author to conclude that the spinal cord represents a functional system within which each central impulse is modified and passed on according to an ontogenetically established specificity of synaptic connections.—*L. J. Stone* (Sarah Lawrence).

3824. Bacq, Z. M., & Coppée, G. Effect of pre-ganglionic nerve section on ganglionic transmission. *J. Physiol.*, 1938, 92, 17-18P.—Section of pre-ganglionic fibers of the cervical sympathetic nerve in the cat produced a block at the ganglion 50-70 hours after the section, although degeneration was not yet complete. The block of transmission seems to be located in the ganglionic synapses and may be due to the disappearance of acetylcholine from the ganglion simultaneously with nerve section.—*M. A. Rubin* (Worcester State Hospital).

3825. Brown, G. L. Effect of small doses of curarine on neuro-muscular conduction. *J. Physiol.*, 1938, 92, 23-24P.—*M. A. Rubin* (Worcester State Hospital).

3826. Brown, G. L., & Harvey, A. M. Neuro-muscular conduction in the fowl. *J. Physiol.*, 1938, 92, 24-25P.—*M. A. Rubin* (Worcester State Hospital).

3827. Chase, A. M., & Haig, C. The absorption spectrum of visual purple. *J. gen. Physiol.*, 1938, 21, 411-430.—The absorption spectra of visual purple solutions obtained by various methods of extraction did not resemble the classical, symmetrical absorption spectrum. It is suggested that the classical absorption spectrum represents the absorption spectrum of the light-sensitive group of visual purple rather than that of the molecule as a whole.—*M. A. Rubin* (Worcester State Hospital).

3828. Covell, W. P. The peripheral endings of the cochlear nerve. *Ann. Otol., etc., St. Louis*, 1938, 47, 63-67.—Histological examination of the cochleas of normal and quinine-injected guinea pigs revealed a pathological condition of the experimental ears. The changes were more pronounced in isolated groups of hair cells from the lower half of the cochlea. Not all hair cells from the same area appeared to be in an identical state of degeneration. That the nerve endings reflected the degree of change in the hair cells with which they were in contact was obvious. Certain aural disturbances such as tinnitus, for which there is at present no recognizable lesion in the peripheral auditory mechanism, may finally be explained by alterations of the nature described, or by other similar changes.—*W. J. Brogden* (Johns Hopkins).

3829. Drohocki, Z. Periodisierung und Automatismus in dem Elektroverhalten der Grosshirnrinde. (Periodization and automatism of the electrical activity of the cerebral cortex.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 171-182.—The electrical potentials from the exposed cerebral cortex of rats and dogs were recorded during the waking state and during various depths of anesthesia. From an analysis of the potential patterns present

in these states it is suggested that the normal irregularity of the potential pattern in the waking state is a result of the interference of many simultaneously excited, functionally related groups of cells within a given architectonic region. Anesthesia effectively separates the various functional groups.—*M. A. Rubin* (Worcester State Hospital).

3830. Drohocki, Z. **Hirnelektrische Echophänomen.** (Echo phenomenon in brain electrical activity.) *Pflüg. Arch. ges. Physiol.*, 1938, **240**, 183-190.—Possible mechanisms whereby the same potential patterns may be produced in different, widely separated cortical regions are considered. The author suggests that whatever the actual mechanism may be, the assumption of similar morphological structures in the various architectonic regions must be made. To test this notion, potential changes from the precentral, parietal and striate areas of the exposed dog and rat brains under light and deep anesthesia are recorded. In light anesthesia the pattern of electrical activity is markedly different in the three areas; in deep anesthesia very similar potential patterns (echo phenomenon) are found in all three areas. It is concluded that in deep anesthesia the potential patterns of the various cortical regions are produced by similar morphological structures; in the waking state, or in light anesthesia, other morphological elements determine the pattern of electrical activity in a given region.—*M. A. Rubin* (Worcester State Hospital).

3831. Echlin, F., & Propper, N. **Sensory fibers in the spinal accessory nerve.** *J. Physiol.*, 1938, **92**, 160-166.—Action potentials are set up in the spinal accessory nerve when stretch receptors in the muscles supplied by the nerve are activated. These high-frequency discharges probably do not give rise to pain.—*M. A. Rubin* (Worcester State Hospital).

3832. Frolov, J. [Man and time. Physiology and psychology of the so-called human "sixth sense."] *Znamia*, 1937, No. 12, 202ff.—Time and space are the fundamental frames of experience. I. P. Pavlov has found that the reckoning of time is the elementary function of each nerve cell, resulting from the physico-chemical properties of the cell. The normal sense of time (the time reflex) was investigated by the author with the aid of a new device. The role of expectation in time judgment was explained as a change of rhythm of the cortical processes.—*A. Yarmolenko* (Leningrad).

3833. Glick, D. **Choline esterase and theory of chemical mediation of nerve impulses.** *J. gen. Physiol.*, 1938, **21**, 431-438.—It is calculated that the maximal rate of destruction of the acetylcholine liberated by a single impulse in the superior cervical ganglion is 0.015 σ . The minimal rate is about 8.0 seconds. In order that the acetylcholine liberated by nerve impulses may occur within a refractory period of 2.0 σ , both acetylcholine and choline esterase would have to be concentrated within a small portion of the ganglion, such as at the nerve endings.—*M. A. Rubin* (Worcester State Hospital).

3834. Granit, R. **Om möjligheterna till analys av processerna i det centrala nervsystemet.** (On the possibilities of analysis of the processes in the central nervous system.) *Finska Läksällsk. Handl.*, 1937, **80**, 716-732.—This is the writer's inaugural lecture upon his appointment to the chair of physiology at the University of Helsingfors. All available methods of research are critically discussed from Broca, through Lashley, "cytoarchitectonics" (Vogt, Brodmann), to electrophysiology and the pharmacological-chemical school (Loewi, Dale, Cannon). The time of work on "general theories" should be past, and future research will probably concentrate more on simple nervous cell complexes along the lines of Lorente de Nó, Bronk, Matthews, and Heinbecker. Bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3835. Grünstein, A. M. [Ed.] **Problemy funktsionalnoi korrelyatsii vegetativnoi nervnoi sistemy.** (Problems in the functional correlation of the vegetative nervous system.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, **9**.—Papers presented at the 6th Congress of the Central Psychoneurological Institute. French and English summaries of each article.—*L. J. Stone* (Sarah Lawrence).

3836. Heymanovich, A. I. **Tsentralnye motornye narusheniya i psikhika.** (Central motor disorders and the psyche.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, **8**, 140-176.—The author discusses recent presentations of the role of subcortical ganglia in personality; he suggests that effects of lesions in such ganglia cannot be considered without recognition of the activity of the brain cortex and the mutual relation between the cortex and the "subcortex." The principal functions of the subcortical ganglia in mental life are emotional (thalamus) and motor. A discussion of many clinically observed phenomena is the basis of theoretical conclusions.—*L. J. Stone* (Sarah Lawrence).

3837. Katz, B. **The reversal of neuro-muscular block by catelectrotonus.** *J. Physiol.*, 1938, **92**, 20-21P.—*M. A. Rubin* (Worcester State Hospital).

3838. Knott, J. R. **Reduced latent time of blocking of the Berger rhythm to light stimuli.** *Proc. soc. exp. Biol., N. Y.*, 1938, **38**, 216-217.—The experiments were designed to discover the factors involved in the reduction of the latent time of blocking. Electrodes were placed on the left occipital area and the ear lobe. A 0.2 cp light served as stimulus. 3 situations were used in the experiment: (1) the subject made no response to light; (2) the subject discriminated; (3) the subject reacted with emphasis on speed. Condition (1) showed longer latency than (2), and (2) longer than (3). 4 control experiments investigated the effects of concurrent dark adaptation, tone, background illumination, and kinesthesia on the latency.—*H. Peak* (Randolph-Macon).

3839. Kranz, J. **Chronaximetrische Untersuchungen bei Kreislaufkranken.** (Chronaximetric investigations on patients with circulatory distur-

bances.) Zeulenroda: Oberreuter, 1938. Pp. 21.—R. R. Willoughby (Brown).

3840. Kreuzeder, R. Über erbliche Sehnerv-
atrophie mit entzündlichen und degenerativen Netz-
hautveränderungen, mit Störungen der Pyramiden-
und Koordinationsbahnen im Kindesalter bei einem
eineiigen Zwillingspaar. (Hereditary atrophy of
the optic nerve, with inflammatory and degenerative
changes of the retina and disturbances of the pyrami-
dal and co-ordinating tracts, in childhood in a
monozygotic twin pair.) *Klin. Mbl. Augenheilk.*,
1937, 100, H. 1. Pp. 29.—R. R. Willoughby (Brown).

3841. Lindberg, A. A. Vliyanie operativnoi
prodolnoi pererezki mozolistogo tela (corpus cal-
losum) na lokomotornye akty sobaki. (The influence
of longitudinal transection of the corpus callosum
upon locomotion in the dog.) *Trud. Tsentral.
psikhonevrol. Inst.*, 1937, 8, 55-60.—Complete longi-
tudinal transection of the corpus callosum in dogs
was followed on the first day by no attempts to move;
food was swallowed while the animal was lying down.
On the second day the dog attempted to come to the
food and stood up briefly and imperfectly, rising
on the fore-quarters first as normally. Attempts to
walk showed a strong ataxia and falling. Recovery
began on the 3rd or 4th day, and 10-14 days after
the operation no marked disorders were evident.
14-18 days after the operation fast running was
normal. 1-6 months afterwards full histological
examinations were made. There was no damage to
the cortex.—L. J. Stone (Sarah Lawrence).

3842. Lisitsa, F. M., & Pentsik, A. S. Sheinye i
labirintnye tonicheskie reflexy v klinike i experi-
mente. (The clinical and experimental study of
tonic neck and labyrinth reflexes.) *Trud. Tsentral.
psikhonevrol. Inst.*, 1937, 8, 99-105.—Tonic neck
and labyrinth reflexes have been observed in human
pathology chiefly in brain stem lesions. The authors
have shown by extirpation experiments that de-
struction of Brodmann's field 4 in dogs is followed
by demonstrable tonic neck reflexes of the limbs of
the opposite side. Local postural responses cor-
responding to these were demonstrated in man when
the patient was placed on all fours on a table that
could be inclined in every direction around its center.
To determine the semeiotic role of the tonic
neck reflexes labyrinthine stimuli, which some-
times effect postural changes through the mechanism
of the neck reflexes, were applied. In human path-
ology such effects can be partly excluded by an
investigation of static reflexes with the special
table. The authors' results suggest that tonic neck
and labyrinth reflexes may be used for topical
diagnostic purposes.—L. J. Stone (Sarah Lawrence).

3843. Loman, J. Progress in neurology in 1936.
New Engl. J. Med., 1938, 218, 426-437.—W. J.
Brogden (Johns Hopkins).

3844. Lullies, H. Über die Vorgänge bei der
Nervenleitung. (Concerning the events in nervous
conduction.) *Biol. Zbl.*, 1937, 57, 249-272.—A
review of the knowledge about nervous conduction,

including consideration of the properties of different
nerve fibers, electrical records, refractory state,
summation time, decrement, the nature of transmis-
sion from nerve fiber to muscle, theories of nerve
conduction. There are 9 figures.—E. R. Hilgard
(Stanford).

3845. MacIntosh, F. C. Effect of preganglionic
section on acetylcholine in the ganglion. *J. Physiol.*,
1938, 92, 22P.—The interval between section of
preganglionic fibers and failure of transmission of
impulses through the ganglion corresponded to that
during which most of the preformed acetylcholine
disappeared.—M. A. Rubin (Worcester State Hospi-
tal).

3846. Markov, D. A., & Kantor, N. G. "In-
dutsirovannye" izmeneniya tonusa i khronaxia.
("Induced" changes of tonus and chronaxy.) *Trud.
Tsentral. psikhonevrol. Inst.*, 1937, 8, 106-109.—
A brief summary of a series of investigations carried
out by the authors using "so-called pharmaco-
chronaxial tests." Chronaxy is regarded as an
indicator of mutual functional interdependence of
the parts of the body; e.g., the effect of the vegetative
nervous system upon the cerebrospinal system. A
functional relation is found between the state of
sensory organs, as in the distribution of sensorimotor
chronaxies in blind and deaf individuals, the asym-
metry of muscle tonus and vestibular chronaxy, etc.
—L. J. Stone (Sarah Lawrence).

3847. Mazurkiewicz, J. O lokalizowanie czyn-
ności psychicznych. (Concerning the localization
of psychical activities.) *Roczn. Psychiat.*, 1938,
31, 1-21.—The author develops a new theory of the
localization of psychic activities. In doing so he
considers facts of evolution of psychic activities
and accepts the existence of transformation stations
which are strictly defined anatomically and in which
the psychic activities characteristic of different
stages of psychical development have their physical
counterpart.—S. Blachowski (Poznań).

3848. Myerson, A. Human autonomic pharmaco-
logy: XII. Theories and results of autonomic drug
administration. *J. Amer. med. Ass.*, 1938, 110,
101-103.—The effects of mecholyl, benzedrine sul-
fate, atropine sulfate, and prostigmine on human
autonomic activity are discussed.—W. J. Brogden
(Johns Hopkins).

3849. Nayrac, P., & Fournier, G. Recherches
sur la surface de l'écorce cérébrale. (Studies on the
cerebral cortex surface.) *Ann. méd.-psychol.*, 1937,
95, No. 2, 581-602.—R. R. Willoughby (Brown).

3850. Popov, N. C. [The weight of brain and
intelligence.] *Neurol. i. Psikiat.*, 1937, No. 3,
127-137.—A. Yarmolenko (Leningrad).

3851. Rohrer, H., & Weitere Untersuchungen
über die Kurvenform cerebraler Potentialschwank-
ungen. (Further investigations of the wave form of
cerebral potential fluctuations.) *Pflüg. Arch. ges.
Physiol.*, 1938, 140, 191-196.—On the basis of a
Fourier analysis, it is concluded that the alpha waves
of the human electro-encephalogram are purely

sinusoidal in form.—*M. A. Rubin* (Worcester State Hospital).

3852. *Sarkisov, S. A. Bioelektricheskie yavleniya motornoi i zritelnoi oblasti kory bolshogo mozga.* (Bio-electric phenomena of the motor and visual areas of the brain cortex.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 69-75.—On the basis of previous experiments the author concluded that the nature of the bio-electric phenomena of the brain is dependent on the cellular structure of various cortical layers; namely that in the presence of layers two and four (small cells), as in the visual area, well accentuated curves of large amplitude are obtained; where these layers are absent or poorly developed, as in the motor region, the curves are poorly accentuated and of smaller amplitude. The present experiment carried out on the visual and motor regions of the cortex of a dog, rabbit, rat and guinea pig fully confirm this finding. Sample curves and the cellular structure of the regions involved are shown.—*L. J. Stone* (Sarah Lawrence).

3853. *Shevchenko, Y. G. Variabilnost stroyeniya kory bolshogo mozga.* (Variability of structure in the cerebral cortex.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 76-84.—The principal sulci of the inferior parietal lobe in anthropoid apes are generally identical with but less deep and less ramified than those of man; tertiary sulci are less numerous. Thus the intrasulcal surface in apes is 53% of the total surface of the region, while in man it is 70%. The disposition of the sulci in anthropoids is characteristically symmetrical, particularly in the chimpanzee. Until now it has been thought that fields 39 and 40 were specifically human; the author's investigations have shown homologous formations in anthropoids, where they occupy the superior parts of the inferior parietal lobe, immediately under the interparietal sulcus; these structures in man extend beyond the limit of the lobe, especially anteriorly. In man the anterior parietal region occupies 10% of the entire cortex surface, while in anthropoids the corresponding figure is 3.4%. In the latter the secondary fields (subareas) are less numerous than in man; field 40 has only superior and posterior secondary fields.—*L. J. Stone* (Sarah Lawrence).

3854. *Skrzypińska, J. Wpływ bodźców protopatycznych na chronaksję n. przedsionkowego.* (The influence of protopathic stimuli on the chronaxy of the vestibular nerve.) *Roczn. Psychiat.*, 1937, 29/30, 102-126.—The author performed 232 experiments on healthy and insane people with the aid of stimuli for taste, smell, pain, and heat. Vestibular chronaxy under the influence of protopathic stimuli undergoes the same qualitative changes in well people as in the insane; but the chronaxic deviations are quantitatively greater in the insane than in normal people.—*S. Blachowski* (Poznań).

3855. *Šopauskas, J. Nervo jaudrumo parametru kitimai nuo sužalojimo.* (Modifications of the excitability parameter of an injured nerve.) Kaunas: Physiological Institute of the University, 1936. Pp.

188.—Experiments on frogs involving the modifications of the excitability parameter, rheobase, and chronaxy after severing a nerve, gave the following results: (1) The rheobase declined and the chronaxy increased when the nerve was severed close to the point of stimulation and a current of decreasing intensity was applied. (2) These modifications varied inversely with the distance between the point of severance and the electrodes. (3) When the nerve was first severed from the central nervous system and later severed again, phenomena occurred similar to those found under normal conditions. (4) The modification of the excitability parameter was only temporary. (5) Injuries of the brain stem and the spinal cord resulted in slighter modifications of the parameter than occurred when the nerve itself was injured. The results contradict Lapicque's theory of the chronaxy of subordination and lead to the assumption that nerve injury results in a special type of permanent excitation, causing fluctuations in rheobase and chronaxy.—*J. Šopauskas* (Kaunas).

3856. *Strasburger, E. H. Die Anatomie der kortikalen Sprachzentren.* (The anatomy of the cortical speech centers.) *Arch. ges. Phonet., Abt. 2*, 1938, 2, 12-39.—"The cortical areas involved in speech are the central anterior (ventral section), the 3rd frontal (opercular and posterior triangular portions), as well as the 1st, 2nd and (perhaps) 3rd temporal as far as the parietal lobe, with the exception of the temporal pole and the nuclear region of Heschl's transversal anterior circumvolution. In right-handed people the left brain centers predominate over the right, especially in expressive speech. As to the outward morphology of the cortical portions, we meet with great variety in the size and shape of convolutions as between individuals as well as between the left and right halves of the brain. Well-established differences between the two sides have so far been observed only in the temporal transversals."—*P. L. Krieger* (Leipzig).

[See also abstracts 3806, 3857, 3877, 3881, 3882, 3913, 3954, 3955, 3957, 4073, 4096, 4144, 4161, 4172, 4174.]

RECEPTIVE AND PERCEPTUAL PROCESSES

3857. *Adrian, E. D. The effect of sound on the ear in reptiles.* *J. Physiol.*, 1938, 92, 9-11P.—Action potentials were recorded from the 8th nerve of the common land tortoise, the box tortoise, the alligator, and the grass snake. In the tortoise the optimum frequency was about 110 cycles per second. The alligator ear followed sound frequencies up to 1000 cycles or more and showed the Wever-Bray effect; the Wever-Bray effect was absent in the tortoise. Loud sounds did not produce any electrical activity in the 8th nerve of the grass snake, but tactile stimulation produced an irregular discharge.—*M. A. Rubin* (Worcester State Hospital).

3858. *Atkins, W. R. G., & Poole, H. H. Photoelectric measurements of the luminous efficiency*

of daylight. *Proc. roy. Soc.*, 1936, B 121, 1-17.—The comparison of light intensity measured by means of a selenium cell and of the total energy flux by means of a thermopile has shown that the amount of light from solar radiation may fluctuate between 35.5 and 120 lumens per watt, that from the diffused irradiation of the sky between 48.5 (sky gray and cloudy) and 158 (sky clear and blue) lumens, and the general effect of the light of day from 81.1 (a winter afternoon) to 119.4 (a clear September day) lumens.—*M. G. Willoughby* (Brown).

3859. **Baldrian, K.** Der "echte" Taubstumme und die Lautsprache. (The "true" deaf and dumb and oral speech.) *Z. Kinderforsch.*, 1938, 47, 28-35.—The author discusses the difficulties experienced by the deaf child in the building up of a normal personality, and points out that these difficulties are greatly mitigated if he is taught oral speech at an early age and thus enabled to communicate with his fellows.—*F. L. Goodenough* (Minnesota).

3860. **Barrett, J.** Accommodation in the eyes of mammals. *Brit. J. Ophthalm.*, 1938, 22, 148-153.—The author surveys the history of the efforts made to ascertain whether mammals other than primates can accommodate.—*R. J. Beitel, Jr.* (American Optical Company).

3861. **Bartley, S. H.** Subjective flicker rate with relation to critical flicker frequency. *J. exp. Psychol.*, 1938, 22, 388-394.—Flicker rate (subjective) and flash rate (objective) were shown to differ as critical flicker frequency is reached. This is demonstrated by the fact that flicker rate (with a constant flash rate) is different for bright and dim flashes, and also by the fact that the flicker rate near critical flicker frequency is about the same regardless of the flash rate and intensity.—*H. W. Karn* (Pittsburgh).

3862. **Bean, C. H.** The blind have "optical illusions." *J. exp. Psychol.*, 1938, 22, 283-289.—In this study 28 totally blind and 28 seeing individuals tactually explored well-known illusion patterns mounted in relief on veneer-ply boards. The only observable difference in the behavior of the seeing and the blind, under similar conditions, was in the number of the illusions. Consistent, repeated responses showed that the Muller-Lyer illusion was experienced by 24 blind and 2 visuals; the Poggen-dorff by 22 blind and 4 visuals; the vertical-horiz-ontal by 22 blind and 3 visuals; the two equal circles within an acute angle by 12 blind and no visuals; the Zollner by 10 blind and no visuals; and the two segments of a ring by 7 blind and 2 visuals. The great majority of the visuals when finally per-mitted to use sight experienced illusions with every standard pattern. This shows that their inferiority to the blind in active touch perception was due to lack of practice in perceiving. The older the person, whether blind or a visual, the more illusions he experienced, and the better his school work the more were his illusions. These facts indicate that those who are equipped to perceive best are also most

likely to have these misperceptions.—*H. W. Karn* (Pittsburgh).

3863. **Békésy, G. v.** Über die Entstehung der Entfernungsempfindung beim Hören. (The origin of the perception of distance in hearing.) *Akust. Z.*, 1938, 3, 21-31.—The author shows that the distance between the source of a sound and the receiver is inferred mainly through the momentary and single change of sound at the source. If the distance between the source of the sound and the receiver is decreased then the timbre of the sound becomes deeper.—*P. L. Krieger* (Leipzig).

3864. **Biegel, R. A.** Rapport betreffende een onderzoek over de verblinding, veroorzaakt door ongekleurde lampen en door selectiva lampen in automobielschijnwerpers. (Report of a study on the glare caused by uncolored and by selective lamps of automobile headlights.) *Wegen*, 1936, 24, 583-590.—An automobile headlight was illuminated for 1 second and the subject told to read a word projected on a screen; the consequent glare was measured by the percentage of words read correctly. When the brightness was 400 lux, 46% of the subjects showed no glare. Among the remainder, 18 served for comparison experiments between white and yellow lamps which were tested at equal intensity, corresponding to different brightnesses on the eye. The yellow was preferable for 7 subjects, the white for 1, the remainder were indifferent or showed no preference.—(Courtesy *Année psychol.*).

3865. **Burri, C.** The concept of abnormal retinal correspondence: a theoretical analysis. *Arch. Ophthalm.*, Chicago, 1938, 19, 409-424.—Neuro-logic evidence fails to support the assumption of exact retinal correspondence by either a cell-to-cell or a retina-to-cortex relationship. Studies of fusion and projection have also indicated a disparity in retinal images which suggests a dynamic plasticity rather than a static anatomical relationship. Sub-jective reports are not reliable indicators of actual retinal correspondence, because subjects have learned to interpret their visual sensations to agree with their other sense data. The "abnormal retinal correspondence" frequently associated with squint may be regarded as based upon the plasticity of retinal correspondence demonstrated in normal eyes.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3866. **Casamajor, L.** Psychic factors in pain. *N. Y. St. J. Med.*, 1937, 37, 1984-1988.—*R. R. Willoughby* (Brown).

3867. **Chard, R. D., & Gundlach, R. H.** The structure of the eye of the homing pigeon. *J. comp. Psychol.*, 1938, 25, 249-272.—A detailed study of the structures of the pigeon's eye reveals an optical mechanism superior to that of man. The pigeon's eye is one-half the weight of its brain, whereas man's is only one-fiftieth of his brain weight. There is a well-defined fovea and area centralis. Retinal blood vessels are absent. The retina is thick, suggesting "the necessity for more connective cells and ramifications of these between the optic nerve fibers and the rods and cones." Striated internal

muscles allow for quick accommodative reactions. Lubrication by means of the nictitating membrane does not greatly interfere with vision. A subsequent study will concern the histology of the retina. Bibliography and four plates.—N. L. Munn (Peabody).

3868. Ciocco, A. Audiometric studies of school children. *Ann. Otol., etc., St. Louis*, 1937, 46, 55-68.—A statistical analysis of the variations in auditory acuity of 543 children, examined twice in a period of approximately 3 years with a Western Electric 2-A audiometer, shows that the variation in acoustic sensitivity is least at 512 cycles, and increases regularly for the lower and higher frequencies. Maximum variation is at the highest test frequency, 8192 cycles. Fluctuation was about 5 decibels above or below the original threshold up to 2048 cycles, increasing to 10 decibels for 4096 and 8192 cycles. Any change in hearing took place over the whole frequency range rather than at one specific test tone. The incidence of a definite decrease in the perception for tones of high frequency at the second test was significantly higher in boys than in girls. Ears with impaired hearing showed a greater variability than normal ears.—W. J. Brogden (Johns Hopkins).

3869. Crozier, W. J., Wolf, E., & Zerrahn-Wolf, G. Critical intensity and flash duration for response to flicker; with *Anax* larvae. *J. gen. Physiol.*, 1938, 21, 463-474.—Curves are given for the flicker response of dragonfly larvae as a function of illumination intensity. With various proportions of light time to dark time in a flash cycle, the parameters of the flicker curve (probability integral) are altered similarly in *Anax* larvae and sunfish. The implications of the experimental findings are discussed in relation to the theory of response to visual flicker.—M. A. Rubin (Worcester State Hospital).

3870. Outler, E. C. The surgical treatment of pain. *New Engl. J. Med.*, 1938, 218, 422-425.—W. J. Brogden (Johns Hopkins).

3871. Dashevsky, A. T. Clinical angioscotometry: a new method, with the use of different contrast test objects. *Arch. Ophthalm., Chicago*, 1938, 19, 334-353.—In addition to the usual campimetric methods, the author suggests measuring the blind spot by sliding out from a black container a band of white or gray paper 5 mm. wide, the length of which can be adjusted to the point where it just disappears in the blind spot. Similarly, angioscotomas are measured by determining the largest test object which will just disappear within the scotoma. Series of white and gray test objects graduated in 1 mm. steps are used on a screen at 2 m.—M. R. Stoll (Mass. Eye & Ear Infirmary).

3872. Di Giorgio, M. Fenomeno di Aubert e orientamento del bulbo oculare rispetto ai piani fondamentali dell'orbita. (The phenomenon of Aubert and orientation of the eyeball with respect to the fundamental planes of the orbit.) *Arch. Fisiol.*, 1936, 36, 257-299.—Four subjects indicated the apparent vertical by monocular observation of a

bar inside a tube. In direct fixation 3 subjects verified Aubert's phenomenon; the other subject showed the inverse. When the regard was directed to the temporal side of the head, with inclination of the head toward the left, the deviation of the apparent vertical is in the normal direction for the right eye and the reverse for the left; with inclination to the right, the inverse is true. With the regard directed to the nasal side, with leftward inclination of the head, the deviation is normal for the left eye and the inverse for the right; with rightward inclination the inverse is true. With regard directed upward, the deviation is in the normal direction for both eyes for leftward inclination and the inverse of normal for rightward inclination. With downward regard there is a tendency to the reversal of normal direction for leftward inclination and to normality for rightward inclination.—(Courtesy *Année psychol.*).

3873. Eger, H. Über den Geschmackssinn von Schmetterlingsraupen. (Concerning the sense of taste of caterpillars.) *Biol. Zbl.*, 1937, 57, 293-308.—Caterpillars of nine different species were tested for perceptual thresholds of sodium chloride, hydrochloric acid, and quinine hydrochloride. The taste sense plays a minor role in the caterpillar's life.—E. R. Hilgard (Stanford).

3874. Eschweiler, H. Hörprüfung und Raumakustik. (Auditory testing and the acoustics of space.) *Z. Hals- Nas. -u. Ohrenheilk.*, 1937, 42, 2. Teil, 266-281.—The acoustics of spaces has an influence upon the examination of hearing and produces great uncertainty and important differences. Whispered words are better for the examination than a loud voice, especially in spaces which are unfavorable from the acoustic point of view. It is not recommended to use a greater distance for the examination than 6 meters. If a greater distance is used, it is recommended to speak not in the direction of the patient, but in the opposite direction. Even then it is better to use a whisper than loud talk.—P. L. Krieger (Leipzig).

3875. Evans, J. N. An introduction to clinical scotometry. New Haven: Yale Univ. Press, 1938. Pp. 279. \$4.00.—R. R. Willoughby (Brown).

3876. Fabry, C. Vision in optical instruments. *Proc. R. phys. Soc., Lond.*, 1936, 48, 747-762.—The eye is studied as an optical instrument. The properties of the ideal eye are investigated and compared with the real eye. It is shown that the effectiveness of the real eye in terms of resolving power or acuity is greatly inferior to what theory would predict. The discrepancy seems to be a function of the diffusion and loss of light.—M. G. Willoughby (Brown).

3877. Ghiselli, E. E. Mass action and equipotentiality of the cerebral cortex in brightness discrimination. *J. comp. Psychol.*, 1938, 25, 273-290.—A 4-unit discrimination apparatus was used to determine the relation between rate of formation of a brightness discrimination habit and the extent and locus of cortical lesions which, in a group of 26 rats, covered almost the entire neo-cortex. The

operated rats made an average of 51.65 errors; normal controls, an average of 9.10 errors. The critical ratio was 5.50. Operated animals required 51.31 trials; control rats, 16.52. The critical ratio was 5.52. There was a clear relationship between the extent of cortical injury and error scores. A formula for the increase in errors as a function of extent of lesion is given. Locus of injury was apparently of no consequence. However, rats subjected to complete destruction of the striate area after training exhibited amnesia. They relearned more slowly than normal but faster than previously operated rats. Decreased efficiency of some central integrative mechanism is believed to underlie the retardation associated with lesions. Bibliography.—N. L. Munn (Peabody).

3878. Hahn, H. Über die Ursache der Geschmacksempfindung. (On the cause of the gustatory sensation.) *Klin. Wschr.*, 1936, 15, 933-935.—The author puts forth the theory that the origin of the gustatory sensation is in monomolecular chemical reactions between the sapid substances and a still unknown substance on the surface of the tongue.—(Courtesy *Année psychol.*).

3879. Hallpike, C. S., & Rawdon-Smith, A. F. The Wever and Bray phenomenon—a summary of the data concerning the origin of the cochlear effect. *Ann. Otol., etc., St. Louis*, 1937, 46, 976-990.—After discussing the experimental work, the authors favor a "membrane hypothesis," in which the cochlear potentials are held to arise from the movements of a polarized membrane, probably the membrane of Reissner.—W. J. Brogden (Johns Hopkins).

3880. Hamilton, J. B. The significance of heredity in ophthalmology. Preliminary survey of hereditary eye diseases in Tasmania (concluded). *Brit. J. Ophthalm.*, 1938, 22, 129-148.—R. J. Beitel, Jr. (American Optical Company).

3881. Hebb, D. O. Studies of the organization of behavior. I. Behavior of the rat in a field orientation. *J. comp. Psychol.*, 1938, 25, 333-353.—Normal and cortically operated rats were placed near the edge of an open field the corners of which contained shields. Behind one shield, which was visually differentiated from the others, food was placed. The author's aim was to note the effect of changes in the immediate and remote environment upon the orientation of normal and operated animals. Lesions covered various parts of the cortex. Operated and normal animals did not show distinctly different behavior. "Both groups preferred the object lying in a certain direction from the rest of the apparatus rather than the visually distinctive goal, when this was rotated. Kinesthesia and olfaction appeared to have no part in determining the direction of response. This result is interpreted as indicating (1) that the response was to a visually perceived object, but (2) that the identity of this object was determined for the rat not by its intrinsic visual characteristics but by a more general orientation based upon auditory and visual room cues." Bibliography.—N. L. Munn (Peabody).

3882. Hebb, D. O. The innate organization of visual activity. III. Discrimination of brightness after removal of the striate cortex in the rat. *J. comp. Psychol.*, 1938, 25, 427-437.—A previous study (see XII: 688) had indicated that rats manifest the transposition phenomenon (response to relative rather than absolute brightness in post-training tests) even when they have had no opportunity to acquire such a function. The present study aimed to determine whether this "innate" function is dependent upon cortical participation. Normal rats and those in which the striate area had been destroyed both manifested the transposition phenomenon. The author concludes that the discrimination "of relative intensity was thus probably mediated by subcortical tissue . . . the dynamic factor in neural action is not restricted to the cortex." Bibliography.—N. L. Munn (Peabody).

3883. Hecht, S., & Pickels, E. G. The sedimentation constant of visual purple. *Proc. nat. Acad. Sci., Wash.*, 1938, 24, 172-176.—Measurements of the sedimentation rate of (frog's) visual purple were made according to Svedberg's procedure, with the air-driven centrifuge of Bauer and Pickels, under several conditions. Results indicate that visual purple is a relatively large molecule having sedimentation-constant values of the same order of magnitude as those found for such proteins as edestin and excelsin; that "the asymmetry of the absorption spectrum is an integral property of visual purple"; that the bleaching in solution "does not represent any drastic splitting of the molecule"; and that the shape of the molecule, as disclosed by molecular-weight computations, "is probably not greatly different from that of a slightly oval particle."—F. S. Keller (Colgate).

3884. Hoff, H., & Pötl, O. Über Transformationen zwischen Körperbild und Aussenwelt. (Transformations between the bodily schema and the outer world.) *Wien. klin. Wschr.*, 1937, 50, 347-351.—This is a report on a patient with almost complete cortical blindness. Vertical movements of the eyeballs resulted in sensations as if the patient's body were suspended in the air. These sensations are described as similar to those of normal persons in typical dreams of flying or falling. The author tries to connect his findings with the mechanisms of the dream and of schizophrenia.—P. L. Krieger (Leipzig).

3885. Holth, S. Mimical ectropion (or entropion) of the eyelids; mono- and bilateral. *Acta ophthalm., Kbh.*, 1937, 15, 370-373.—P. L. Krieger (Leipzig).

3886. Holway, A. H. On color changes without variations of wave-length. *Amer. J. Psychol.*, 1938, 51, 429-434.—A mixture of 60 parts Hering Y and 300 parts Bk on a color wheel results in an experience of olive green or drab. A spectrophotometric analysis of the light reflected from each paper was made, and a graph is given of the weighted mixture. An analysis of this graph shows that the increase in intensity is greater for the shorter than for the longer wave-lengths. This is interpreted in terms of the

Helmholtz theory to indicate that the B-fibers are excited relatively more than the R- and G-fibers, resulting in a decrease in the saturation of the Y. In addition there is an increase in the excitation of the G-fibers, due to the relatively large increment in the amount of light in the G region. Hence the observed shift in hue.—*D. E. Johannsen* (Skidmore).

3887. **Hundertmark, A.** Das Helligkeitsunterscheidungsvermögen der Stabheuschrecke (*Dixippus morosus*). (The capacity for brightness discrimination in the walking-stick *Dixippus morosus*.) *Biol. Zbl.*, 1937, **57**, 228-233.—Although color discrimination is lacking, brightness discrimination can be demonstrated satisfactorily.—*E. R. Hilgard* (Stanford).

3888. **Hütteroth, R.** Die Hörfähigkeit Radikaloperierter. (The auditory capacity of radically operated patients.) Leipzig: Kabitzsch, 1937. Pp. 26.—*R. R. Willoughby* (Brown).

3889. **Jenkins, W. L.** A critical examination of Nafe's theory of thermal sensitivity. *Amer. J. Psychol.*, 1938, **51**, 424-429.—"Considering the crushing weight of the negative evidence and the inconclusiveness of the positive evidence, we conclude that Nafe's vascular theory is untenable as an actual description of the nature of thermal sensitivity. The assumption of specific warm and cold receptors is more valuable as a working hypothesis and it accords far better with the experimentally demonstrated facts."—*D. E. Johannsen* (Skidmore).

3890. **Jochem, B.** Geruchssinn und Diagnose. (The olfactory sense and diagnosis.) Bonn: Brand, 1938. Pp. 32.—*R. R. Willoughby* (Brown).

3891. **Katz, D.** Touch in massage and in general medical technique. *J. chart. Soc. Massage, med. Gymn.*, 1936, Congress Number, 1-7.—The author has devised a method for interpreting the vibratory sensations in percussion which serve to delimit organ contours.—(Courtesy *Année psychol.*).

3892. **Kehl, H.** Über die Erbllichkeit der Myopie mit besondere Berücksichtigung der Blutsverwandschaft der Eltern. (The inheritance of myopia, with special reference to the consanguinity of the parents.) B.-Charlottenburg: K. u. R. Hoffmann, 1938. Pp. 31.—*R. R. Willoughby* (Brown).

3893. **Kelley, N. H.** Historical aspects of bone conduction. *Laryngoscope, St. Louis*, 1937, **47**, 102-107.—An historical review in which the significant advances in the understanding of hearing sound by bone conduction are discussed and integrated.—*W. J. Brogden* (Johns Hopkins).

3894. **Kobrak, H. G.** Experiments on the conduction of sound in the ear. *Ann. Otol., etc., St. Louis*, 1938, **47**, 166-175.—Contraction of the intrinsic muscles of the ear causes a diminution in the vibrations of the ossicles. The presence of reflex contraction during intense acoustic stimulation, and its absence at threshold intensities, point to a protective function of the muscles. The stapedius has a lower threshold than does the tensor tympani. The intensity of the acoustic stimulus controls the strength

of muscular contraction. Each tone has therefore its own characteristic sensitivity of sound conduction. The conditions of sound conduction are not constant. Each tone travels over an ossicular chain, the sensitivity of which is specially adapted to the physical qualities of the tone. Most of the experiments in which these observations were made were carried out on the rabbit. Additional material was collected from the rat, the dog, and also the human.—*W. J. Brogden* (Johns Hopkins).

3895. **Kraskin, L. H.** Psychology and diagnosis. *Amer. J. Optom.*, 1938, **15**, 129-137.—Several cases are briefly presented to support the thesis that psychological elements may be responsible for symptoms usually associated with organic disorders.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3896. **Kuckulies, G.** Experimentelle Untersuchungen über die spezifische Qualität des Bittergeschmackes. (Experimental studies on the specific quality of the bitter taste.) Berlin: Inaug. Diss., 1936. Pp. 18.—The specificity of the receptor system for bitter is established by a difference in the variation of sensitivity as a function of the temperature; by an additivity of chemical substances entirely different; and by an adaptive influence which a bitter solution has on the sapid action of the same substance and other substances.—(Courtesy *Année psychol.*).

3897. **Kupfer, E.** On the origin of the Wever-Bray response and on the electro-therapy of the ear. *J. Laryng.*, 1938, **53**, 16-31.—The electro-acoustic effect and the Wever-Bray phenomenon of the ear may be explained by the disturbance and displacement of Freundlich's electrical double layers at phase boundaries of liquids and solids in the cochlea. Tinnitus, understood as an electrical phenomenon, can be neutralized in many cases by electro-therapy.—*W. J. Brogden* (Johns Hopkins).

3898. **Kurtz, J. I.** An experimental study of ocular fatigue. *Amer. J. Optom.*, 1938, **15**, 86-117.—After reviewing previous studies of fatigue, the author gives an account of his own study of ocular fatigue in 7 subjects. By dynamic skiametry he determined the amount of accommodation used when the subject fixated a small letter at $\frac{1}{3}$ m. The amplitude of accommodation was then determined by inserting minus lenses before the subject's eyes until the print entirely blurred and then reducing the blur until visibility was just attained; the dioptric strength of the final lens plus the 3 diopters necessary to accommodate for the fixation distance represented the amplitude of accommodation. With the ophthalmograph photographic records of the movements of the two eyes were made while the subject read a paragraph of 150 words (the sample given is a series of nonsensical statements). Tests were made before and after 30 minutes of intensive near work. The amount of accommodation required for near fixation did not vary, and in only one subject was a decrease in amplitude of accommodation apparent after the work period. The photographic records, however, indicated decreased reading efficiency, and all but

one subject complained of sensations of discomfort which might be interpreted as fatigue symptoms.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3899. Lane, H. S. **Measurement of the mental and educational ability of the deaf child.** *J. except. Child.*, 1938, 4, 169-173.—If intelligence be defined as "the ability to use judgment in adjusting to various situations presented in the environment," a performance test should give an adequate measure of the intelligence of the deaf child. Testing of the deaf child at the nursery school age is essential for adequate provision for his later educational progress. The Randall's Island performance series is valuable here. Meyer's lectometer can be used at the school ages. Results from such tests do not show mental retardation of the deaf as a group. Certain problems specific to the testing of the deaf are discussed. Educational achievement tests should be included in any testing program, and results of some testing of this sort show the deaf to be retarded about two years. Retardation is greatest on tests involving language, and increases with chronological age. Suggestions for alleviating this retardation and also for a testing program for the deaf are made.—*C. N. Cofer* (Brown).

3900. Law, F. W. **On the value of orthoptic training.** *Brit. J. Ophthalm.*, 1928, 22, 193-204.—From an analysis of the results obtained with 124 cases at the Paddington Green Children's Hospital (London) since 1935 the author considers the following conclusions to be justified: (1) A far greater proportion of squints than is generally supposed can be cured by glasses, and occlusion where necessary. (2) Only those cases in which such measures have failed should be submitted to orthoptic training. (3) Cases should be considered and selected for training not only on their clinical merits but also with due consideration for the end it is desired to achieve and for the justification for the means necessary to attain it. (4) The results of orthoptic training are far less dramatic and far less certain than they are held to be in some quarters, and the descriptions of the value of such training which have appeared in the medical press have all erred on the side of optimism.—*R. J. Beitel, Jr.* (American Optical Company).

3901. Lindner, R. M. **An experimental study of anticipation.** *Amer. J. Psychol.*, 1938, 51, 253-260.—The present study undertakes to describe that transitional mode of apprehending the immediate future which is already implied by certain aspects of the perceived present. Two experiments were performed. In the first, the apparatus presented one of two landscapes, S being prepared for the first by a single and for the second by a double buzz. In the second a ball rolled out of one of three openings, preceded by 1, 2, or 3 clicks. In both cases it was found that the anticipatory phase includes several functional variants, mainly of the apprehending type, of which searching was the most important. It has the marks both of perceiving and of imagining. In the case of the second experiment it was found

that the final action of catching the ball was not usually apprehensively noted, and consequently it is concluded that anticipating may be an intermediary between apprehension and action.—*D. E. Johannsen* (Skidmore).

3902. Locke, N. M. **A comparative study of size constancy.** *J. genet. Psychol.*, 1937, 51, 255-265.—A similar stimulus situation was presented to three rhesus monkeys, three children, and six human adults, and the size constancy responses of each were determined. All groups showed size constancy to a fairly large extent. There was no differentiation between the intention-ratio scores of animals, children, and adults. It is suggested that the experimental situation may have been too simple to permit such group differences as exist to show themselves.—*E. Heidbreder* (Wellesley).

3903. Marlow, F. W. **A tentative interpretation of the findings of the prolonged occlusion test on an evolutionary basis.** *Arch. Ophthalm.*, Chicago, 1938, 19, 194-204.—In 700 cases suspected of muscle imbalance, the prolonged occlusion test indicated exophoria in 78% of the cases, esophoria in 12%, and hyperphoria (usually in association with a lateral deviation) in 84%. The exophoria may be regarded as representing a failure to reach the condition of parallelism in which the evolutionary process has culminated. The hyperphoria may be considered a vestige of the pre-binocular period when vertical deviations caused no difficulty. The esophoria, which rarely occurs alone, may represent an excessive change toward parallelism from the divergence of early fetal life. Thus all forms of muscle imbalance are related as representing intermediate evolutionary stages.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3904. Nafe, J. P., & Wagoner, K. S. **The effect of pain upon systemic arterial blood pressure.** *Amer. J. Psychol.*, 1938, 51, 390-397.—The present study undertook to determine the relation between sensitivity to pain and changes in blood pressure. A kymograph record of blood pressure and respiratory changes was made. Pain was produced by means of electricity, heat, and pricking. 7 college students served as S's. It was found that a rise in systolic blood pressure consistently accompanied the types of stimulation used, and usually diastolic changes paralleled the systolic. The stimulations used here did not appear to produce a consistent effect on the heart rate. There was no evidence to show that the blood pressure changes resulted from respiratory changes.—*D. E. Johannsen* (Skidmore).

3905. Pal, G. **Difference limen for continuous change of lifted weight under different attitudes.** *Indian J. Psychol.*, 1937, 12, 188-196.—The author continues the investigation recorded in Vol. 12, No. 2 (April, 1937). He recounts the relationship of the following factors to the introspective accounts of the subjects investigating this limen: adaptation phenomena, shift of attitude, different patterns of weight consciousness under different attitudes, and the role of the visual image and of internal articulation.—*L. A. Averill* (Worcester Teachers College).

3906. Philip, B. R. Sex differences in the perception of color mass. *Amer. J. Psychol.*, 1938, 51, 398-404.—The administration of the author's discrimination of color mass test (*Amer. J. Psychol.*, 1938, 51, 127-135) to 485 boys, 205 girls, 365 men, and 130 women, showed distinctly that the most errors were made at every decile by the boys, the fewest by the women.—D. E. Johannsen (Skidmore).

3907. Platonova, E., & Sozina, S. [The clinical value of Head's zones.] *Neuropat. i Psikiat.*, 1937, No. 5, 112-120.—In 15 gynecological cases the hyperesthetic zones described by Head were observed. These zones correspond to the affected organs. A generalization of the zones was observed after operations. After normal parturition the zones disappear within 1-6 hours. Head's zones have no absolute diagnostic value, but can be used as an additional method.—A. Yarmolenko (Lenin-grad).

3908. Polvogt, L. M., & Crowe, S. J. Anomalies of the cochlea in patients with normal hearing. *Ann. Otol., etc., St. Louis*, 1937, 46, 579-591.—17 cases in which there was either a communication between the scala vestibuli and the scala tympani, arrested development of the bony structure in the apex of the modiolus, more or less than the normal number of turns, variations in position of an individual turn, or vascular anomalies showed no deviation from the normal in hearing.—W. J. Brogden (Johns Hopkins).

3909. Pratt, J. G. An experimental analysis of the process of solving a weight discrimination problem in white rats. *J. comp. Psychol.*, 1938, 25, 291-314.—The pulling-in technique was used. All groups began training with the reward associated either with the lighter of a pair of weights (experimental) or with the heavier (control). Reversal of these relations and variations involving transposition (substitution of a lighter or heavier weight for one of those of the original training) were introduced at different stages of learning. The author's aim was to determine the nature of the learning process *qua* process and to discover the influence of latent learning. He observed that learning involves, for the rat, "an effect of the whole situation chiefly in terms of its pair-reward relation." The critical point of the learning curve "is not peculiarly characterized by 'insight,' but . . . may simply be the point at which the learning process has become able to tip the scales of overt behavior in favor of efficiency of outward performance." As observed in this study, the learning process is "marked more by the accumulating effect of experience than by changes in the mode of experience." Bibliography.—N. L. Munn (Peabody).

3910. Révész, G. Zur Grundlegung der Blinden-Psychologie. (Concerning a foundation for the psychology of the blind.) In Various, *Festschrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 149-162.—The fundamental problems of the psychology of the blind are: How does the space world of the blind appear? What structure does it have? Of what

nature are the space Gestalten conceived by the blind and how do these originate? Very little of fundamental importance has appeared in the literature since Theodore Heller's work of forty years ago. Four definite approaches to and methods of building up a real psychology of the blind are outlined. Footnote references.—M. L. Reymert (Mooseheart Laboratory for Child Research).

3911. Schaffer, J. Die Duftorgane des Menschen. (Odor-producing organs of the human body.) *Wien. klin. Wschr.*, 1937, 50, 790-797.—The organs of the body producing odor are located: (1) in the axillae, (2) in the mammae, (3) around the anus, (4) in the external ear channel, (5) on the eyelids, (6) on the lips and around the mouth, (7) in the genital region (prepuce, labiae, mons pubis).—P. L. Krieger (Leipzig).

3912. Schulze, H. F. Versuche zur Resonanztheorie des Hörens. (Experiments on the resonance theory of hearing.) *Z. Biol.*, 1938, 98, 421-429.—The human cochlea was opened at three different places in its canal, and a manometer was inserted. After that the ear was normally stimulated by a siren at the middle ear, which had not been operated upon. The change in pressure in the canal could be registered by the manometers. The maximum of resonance was dependent upon the distance of the operative opening from the oval window. The resonance points of the higher tones lay relatively closer together in the cochlear canal than those of the deeper tones. The highest pressure which could be measured was 4.5 mm. Hg.—P. L. Krieger (Leipzig).

3913. Smith, K. U. Visual discrimination in the cat: V. The postoperative effects of removal of the striate cortex upon intensity discrimination. *J. genet. Psychol.*, 1937, 51, 329-369.—This study attempts to determine the effects of removal of the striate cortex on the measured visual capacity of the cat in intensity discrimination. Apparatus and technique which permit controlled investigation of intensity discrimination in the cat are described. The effects of partial and complete bilateral removal of the striate cortex are presented in detail. Evidence supports the assumption that the subcortical visual pathways in the cat and other mammals are differentiated to such a degree as to mediate responses correlated with both intensive and patterned differences in stimulation. The main function of the striate cortex seems to involve neural control of responses correlated with reduced gradients in retinal illumination in respect to either intensity or pattern vision. Separation of visual functions between the striate cortex and the subcortical visual centers seems to be one of degree rather than of kind.—E. Heidebreder (Wellesley).

3914. Smith, W. Technique in strabismus orthoptics. *Amer. J. Optom.*, 1938, 15, 138-149.—Considering strabismus as "an anomaly . . . produced as the result of the arrested development of the visual pathway and the visual reflex arc," the author enumerates eleven steps in the corrective

training process.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

3915. *Stefanini, A.* Sul numero di oscillazioni sonore che occorrono per eccitare i risonatori cocleari. (On the number of sound oscillations which intervene to stimulate the cochlear resonators.) *Arch. ital. Otol.*, 1936, 48, 1-11.—On each of 2 thin adjoining vibrating plates borne upon a common support there is a movable weight for governing the vibratory frequency (very low, of the order of 3 per second); attached to the plates is a delicate microscopic index. When one of the plates is plucked, the other plate commences to vibrate, as observed by the displacement of the index under the microscope, even before the first has reached its initial position, i.e., before a quarter of a period. When 2 tuned plates borne upon different supports are plunged into a vessel which may either be empty or filled with water, it is noted by microscopic observation that there is vibratory transmission by resonance in the air as well as in the water; if the tuning is modified, the amplitude of the induced vibration increases in proportion to the degree that it approaches unison.—(Courtesy *Année psychol.*).

3916. *Stokvis, B.* Psychophysiologische onderzoekingen over de pijn bij den mensch. (Psychophysiological studies of human pain.) *Ned. Tijdschr. Psychol.*, 1938, 5, 406-418.—The influence of pain on blood pressure was studied in patients in a dental and neurological clinic and in subjects who were stimulated by pinching and a galvanic shock. The effects of autosuggestion and expectation were taken into account. The results indicate that blood pressure fluctuates more during real pain than as a result of autosuggestion; expectation results in hypertension and a greater fluctuation than occurs under any other condition; the patients reacted more vigorously than the other subjects; systolic pressure is more variable than diastolic.—*H. Beaumont* (Kentucky).

3917. *Struycken, —.* Bestimmung des Minimum Audibile mittelst Stimmgabeln und Klangstäbchen. (The determination of the lower auditory threshold by means of the tuning fork and tuning rod.) *Z. Hals- Nas.- u. Ohrenheilk.*, 1936/37, 40, 2. Teil, 438-486.—*P. L. Krieger* (Leipzig).

3918. *Summerskill, W. H.* Treatment of the amblyopic eye. *Brit. med. J.*, 1936, No. 3934, 1101-1103.—The frequent success of psychotherapy in the treatment of amblyopia suggests phenomena of obstruction and inhibition in the psychological sector of the visual arc.—*M. G. Willoughby* (Brown).

3919. *Tschermak-Seysenegg, A.* Über chromatische Mitverstimmung zwischen beiden Augen. (Concerning chromatic coincidence of both eyes.) In *Various, Festschrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 97-108.—A series of experiments on chromatic coincidence with apparatus and method partly devised by the author. Tables, footnotes, bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

3920. *Velhagen, K.* Die hypoxämische Farbenasthenopie, eine latente Störung des Farbensinnes. (Chromatic asthenopia by hypoxemia, a latent disturbance of the color sense.) *Arch. Augenheilk.*, 1936, 109, 605-621.—Using Nagel's anomaloscope, the author observed subjects submitted to atmospheric pressure in a pneumatic chamber. In the majority there was a marked lowering of differential sensitivity for colors and brightnesses; in some there was a disturbance of chromatic sensitivity, which resembled abnormal congenital trichromatism. In abnormal trichromatics the influence of the pressure was expressed by a transformation into typical dichromatism.—(Courtesy *Année psychol.*).

3921. *Velhagen, K.* Umstimmung des Farbensehens im Unterdruck-Kammerversuch. (Change in chromatic vision in the course of studies in a low-pressure chamber.) *Luftfahrtmedizin*, 1936, 1, 116-119.—From a level of atmospheric pressure corresponding to 3000 meters of altitude up to 6000 meters, most of the 16 subjects manifested a weakness in color vision. 4 of the subjects behaved like abnormal trichromats, with return to normal vision by re-establishment of the pressure or inhalation of oxygen; 2 with abnormal vision became daltonians under the action of insufficient oxygen and behaved like typical dichromats.—(Courtesy *Année psychol.*).

3922. *Waetzmann, E.* Absorptionsmessungen am Trommelfell mit der Schusterschen Brücke. (Measurement of absorption at the ear drum with the bridge of Schuster.) *Akust. Z.*, 1938, 3, 1-6.—The method of Carl Schuster is so modified by the author that it fits for the measurement of absorption on the ear drum. With this newly constructed apparatus, the measurements of which are described in detail, the degree of absorption within the limits of 350-1500 Hz is measured in several persons. The taking of the measurements requires a short time only, which is in great contrast to previous methods. The right and left ear of the same person give in general very similar values, but different persons often show great differences.—*P. L. Krieger* (Leipzig).

3923. *Werner, H. C.* A descriptive study of somatic objects. *Amer. J. Psychol.*, 1938, 51, 225-234.—The purpose of the present study was to determine the apprehending of somatic objects under experimental conditions. The apparatus permitted a variable traction to be exerted upon different parts of S's body. S was instructed to resist attempts to displace the parts of the body and to report in terms of "perceptive products." The results showed that the perceptive products fall into two classes—somatic and non-somatic. The latter are always apprehended in relation to the body, while the former are body. Which reference occurs depends upon many factors, including the stimulus, the task, and the instructions. The organism in solving the task set functioned in the perceiving, imagining, searching, inspecting, comprehending, acting, and emoting modes, but elaborative thinking did not appear under these conditions.—*D. E. Johannsen* (Skidmore).

3924. Wever, E. G. The width of the basilar membrane in man. *Ann. Otol., etc., St. Louis*, 1938, 47, 37-47.—Measurements were made at 17 to 19 positions, depending upon the number of turns, in 25 cochleas, of which 20 were sectioned in the vertical plane of the petrous pyramid and 5 in the horizontal plane. By a graphic reconstruction method these positions were determined for each cochlea in terms of distance from the basal end. Measurements for the different ears were in good agreement in the basal part of the cochlea, but showed wide variations in the apical part. Most of the basilar membranes, and particularly those of more than average length, attained a maximum width at a point about half a turn before the apical end and then decreased rapidly. The average value of the maximum points measured 498 micra, which is about $6\frac{1}{4}$ times the minimum width of 80 micra as measured in a special series of sections. No significant relation was found between the form of the basilar membrane and age, sex, race, or the condition of hearing as shown by the audiograms made before death. It is pointed out that a theory of hearing that postulates a differentiating role for the width of the basilar membrane must allow for a wide range of normal variation in the apical region.—W. J. Brogden (Johns Hopkins).

3925. Wever, E. G., & Bray, C. W. The tensor tympani muscle and its relation to sound conduction. *Ann. Otol., etc., St. Louis*, 1937, 46, 947-961.—Using the electrical response of the cochlea, the reactions to various tonal stimuli were measured under normal conditions and during the application of artificial tension to the tensor tympani tendon. The curves obtained by varying the degree of tension while stimulating with a tone of given frequency and intensity are of the same general form under most conditions. With increasing tension the responses suffer a diminution that is at first rapid and then progressively slower. The tension curves maintain this same form for all but the high intensities of stimulation, where they show various forms which are determined by the particular nature of the functional relation between magnitude of response and intensity of stimulation. The functional relations of tension and stimulus frequency are complex. In addition to a reduction of sound conductivity, tension raises the natural frequency of the transmission system of the ear. These two effects combined give a relation to frequency which is determined by the particular form of the sensitivity of the ear.—W. J. Brogden (Johns Hopkins).

3926. Wimmer, H. Zur Frage der Projektion der Empfindungen und des Aufrechtsehens trotz umgekehrter Netzhautbilder. (The problem of the projection of sensations and of upright vision in spite of the inverted retinal images.) *Psychiat.-neurolog. Wschr.*, 1936, 38, 579-592.—The projection of sensations into the outer world and particularly the very unsatisfactory localization of feelings in the inside of our body are purely empirical mechanisms that should be made the object of physiological examination. They are caused by motor processes

which are sometimes really done, but also often only imagined. We must connect them with passive impressions in order to get perceptions and sensations.—P. L. Krieger (Leipzig).

[See also abstracts 3789, 3800, 3802, 3820, 3832, 3838, 3840, 3854, 3927, 3989, 3991, 3992, 3995, 3996, 4006, 4014, 4023, 4115, 4138, 4142, 4165, 4207, 4250, 4308, 4314.]

LEARNING, CONDITIONING, INTELLIGENCE

(incl. Attention, Thought)

3927. Adams, D. K. Recherches sur la comparaison successive avec grandes différences chez les rats. (Researches on successive comparisons with great differences in the rat.) *J. Psychol. norm. path.*, 1937, 34, 532-554.—This is a study of weight discrimination in rats, with special emphasis on transposition with varying time intervals between the initial practice period and the introduction of lighter or heavier weights for comparison. The weight that was the lighter for the practice period became the heavier for later trials, and the weight that was the heavier in the practice period was compared with a still heavier one in later trials. The author concludes that Köhler's theory of sedimentation is the only adequate explanation of the results.—R. E. Perl (New York City).

3928. Agar, W. E. A Lamarckian experiment involving a hundred generations with negative results. *J. exp. Biol.*, 1931, 8, 95-107.—"The experiment was devised to find out whether regeneration of the dorsal branch of the second antenna of *Sirnocephalus* and *Daphnia*, repeated for many generations, would result in an improvement in the generation (which is very imperfect) or in any other alteration in the process. Neither the character nor extent of the regeneration was influenced in any measurable degree in any of the experimental lines, even after 100 generations, nor was the normal growth of the antenna affected. A similar experiment, except that selection was practiced in addition, likewise produced negative results, confirming both the lack of the Lamarckian effect and the inefficacy of intracolonial selection."—C. N. Cofer (Brown).

3929. Agar, W. E., Drummond, F. H., & Tiegs, O. W. A first report on a test of McDougall's Lamarckian experiment on the training of rats. *J. exp. Biol.*, 1935, 12, 191-211.—After carrying their experiment, which duplicates the procedure of McDougall with a few modifications, for five generations, the authors report that no increase in the facility of the learning of their rats has occurred. The experiment is being continued. Certain aspects of the McDougall experiment are criticized, and the use of the Lamarckian hypothesis to explain the results is discussed. The authors have introduced controls for each generation in their experiment, in order to check the possibility of unnoticed changes in experimental conditions or in the constitution

of the entire stock from which their rats were taken which could cause better performance irrespective of previous training. Since some rats establish a pronounced habit of turning consistently to the right or left, despite the existence of two possible gangways, the use of raw error scores as a criterion of facility of learning is questioned. McDougall's practice of having several rats in the tank at once is not used in this experiment, and it is pointed to as a possible source of error. McDougall's shock was of variable intensity; this aspect of the experiment was kept constant in this work. It is pointed out that McDougall changed his procedure in the ninth generation, so that his results can be considered only from that point.—*C. N. Cofer* (Brown).

3930. Barke, E. M., & Williams, D. E. P. A further study of the comparative intelligence of children in certain bilingual and monoglot schools in South Wales. *Brit. J. educ. Psychol.*, 1938, 8, 63-77.—Two verbal intelligence tests given in English and Welsh, the Pintner non-language mental tests and Thorndike word-knowledge tests, one form in English and another translated into Welsh, were given to 10.5- to 11.5-year-old mining district children known to be of three groups, bilingual, combined and monoglot. The difference between bilingual and monoglot groups in the non-language tests was insignificant. The bilinguals are distinctly inferior on the verbal mental test given in their second language, but even more so in the test given in their mother tongue; in either language the bilinguals appear unable to "do justice to themselves" in verbal tests. On the word-knowledge tests the bilinguals, both in mother tongue and second language, were inferior in vocabulary to the monoglots, which probably accounts in large part for the inferiority on the verbal intelligence tests.—*K. M. Cowdery* (Stanford).

3931. Bierens de Haan, J. A. Du degré d'intelligence chez les animaux et de leur place dans le système zoologique. (The degree of intelligence in animals and their place in the zoological system.) *J. Psychol. norm. path.*, 1937, 34, 353-376.—The author tests the supposition that there exists a parallel between the morphological development of an animal and its psychological development. The question he asks is whether the degree of intelligence shows a correlation with the place of the animal in the zoological system. Using Köhler's problems and others, he concludes that the degree of intelligence does not depend upon the animal's morphological position. The high scores made by the raccoons and the coatis are especially striking. The chimpanzees do not have the highest degree of comprehension in all situations.—*R. E. Perl* (New York City).

3932. Bruce, R. H. The effect of lessening the drive upon performance by white rats in a maze. *J. comp. Psychol.*, 1938, 25, 225-248.—Deprivation of food for 24 hours provided more effective motivation than did deprivation of water for an equal period. Rats trained with a specific food reward showed better performance than did rats rewarded

with different foods from time to time. Giving food to the hungry group and water to the thirsty group just prior to the actual maze running led to superior performance despite lessening of the drive. There was almost complete retention of a thoroughly learned maze habit after six weeks. Various theoretical implications of the data on drive are offered. Bibliography.—*N. L. Munn* (Peabody).

3933. Carpenter, C. R., & Locke, N. M. Notes on symbolic behavior in a Cebus monkey. *J. genet. Psychol.*, 1937, 51, 267-278.—Trading or exchange responses similar to those reported in chimpanzees have been shown to lie within the behavioral capacities of a Cebus monkey. Beginning with a generalized trading response in which any object was exchanged for food, differentiation occurred until a specific object was traded for food. The evidence, though not conclusive on this point, suggests that after a large number of trials an association may be established between a particular symbol and a given kind of food.—*E. Heidbreder* (Wellesley).

3934. Courts, F. A., & Waggoner, D. The effect of "something happening" after a response. *J. exp. Psychol.*, 1938, 22, 383-387.—In an experimental study of the influence of certain informative and non-informative stimuli following responses in a learning situation, it was found that a flash of light has no appreciable influence on performance when the subject is given definite information of the correctness of his preceding response. However, when no definite information is given, responses followed by a flash of light show a significant tendency to be repeated more than responses followed by no light. It is concluded that in the absence of definite information of success or failure, a "non-informative" stimulus following a response in a trial-and-error situation tends to become an informative cue of success. Data were obtained from 53 subjects.—*F. A. Courts* (Stanford).

3935. Dashiell, J. F. Contributions to education of scientific knowledge about the psychology of learning. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 393-403.—Recent experimental work has proved that an organized habit is more than a chain of reflex arcs. Within the last ten years the principle of insight has replaced the former orthodox emphasis upon the random trial-and-error character of learning. The observations and claims of Pavlov and Bekhterev have been experimentally verified with the more recent understanding that the phenomenon of stimulus-substitution originally involves the whole organism and only gradually becomes localized. J. B. Watson's early work with conditioning has had important implications for mental-hygiene practices. The law of effect has been repeatedly challenged and the view has been advanced that punishment per se has little direct value. "The other classic 'secondary laws' of associative learning—frequency, recency, primacy—have not been shown to be important." The goal-seeking attitude is considered very important in learning, thus supporting educational doctrine from the time of Froebel. "That transfer

does take place is frequently apparent, but why it takes place in one situation and not in another is difficult to determine." Operative experimentation in neuropsychological laboratories enables us to generalize that "learning is not the building up of highly specific and fixed pathways, but the reaching of some new equilibrium in that dynamic field called the nervous system."—*P.S. de Q. Cabot* (Simmons).

3936. Dudensky, I. V. [Influence of muscular work and counting on reflex activity.] In Various, [Types of conditioned reflex activity in children.] Moscow: 1936. Pp. 115-132.—After defining the type of the conditioned reflex activity, there was included in this activity a simple form of muscular work—the ergograph and counting aloud. The changes of reflex activity do not contradict the fundamental type tendencies, but only reflect the further stages of rebuilding the neurodynamic structures.—*A. Yarmolenko* (Leningrad).

3937. Gesell, A. The conditioned reflex and the psychiatry of infancy. *Amer. J. Orthopsychiat.*, 1938, 8, 19-30.—This is a survey of 57 titles devoted to the conditioned reflex, covering comparisons of the assumptions involved in C-R theory with those involved in the concept of maturation, the study of infant behavior by the C-R method, C-R interpretations of psychopathology, the relationships between C-R concepts and psychoanalysis, and the utilization of C-R techniques in infant psychiatry. Theoretical aspects of C-R investigation far outweigh technical application, and it is concluded that clinical applications must remain limited in scope for some time.—*J. McV. Hunt* (Brown).

3938. Guillaume, P., & Meyerson, I. Recherches sur l'usage de l'instrument chez les singes. IV. Choix, correction, invention. (Researches on the use of tools by monkeys. IV. Choice, correction, invention.) *J. Psychol. norm. path.*, 1937, 34, 425-449.—In human psychology choice implies that the subject can perceive several possibilities of action and that he hesitates, if only for an instant, before making a decision. But in animals it is difficult to prove that there is such a choice. The experimenter creates a situation where he himself sees many diverse possibilities, but he is not always sure that the animal has perceived them all. Only the results of many experiments can show whether a choice really existed. The experience of choice is especially interesting when the circumstances which are to determine the choice are not immediately present for comparison. The authors devised several problems of this type and describe the behavior of monkeys in solving them, discussing initial choice, correction, and invention.—*R. E. Perl* (New York City).

3939. Gurnee, H. The effect of electric shock for right responses on maze learning in human subjects. *J. exp. Psychol.*, 1938, 22, 354-364.—Five groups of human adults were run through a bolthead maze. Two groups received light shock, one for right and one for wrong responses, beginning with the fifth trial. Two other groups received

moderate shock, one for right and one for wrong responses. In terms of the major criterion, a gain or loss in the probability of fewer errors than the control group, the following results appeared: light shock for right responses was most effective; then came, in order, light shock for wrong responses, moderate shock for wrong responses, no shock, moderate shock for right responses. The differences were rarely of statistical significance.—*H. Gurnee* (Western Reserve).

3940. Gustav, L., & Wolf, K. Kinderpsychologische Experimente mit bedingten Reflexen. (Experimentation in child psychology by the use of the conditioned reflex.) *Z. Kinderforsch.*, 1937, 46, 307-336.—The authors criticize the concept of conditioning as an explanatory principle of human development on two grounds, first that it involves such an oversimplification of the interaction between the individual and his surroundings that it becomes essentially meaningless, and second that it fails to take into account the principle of co-variance, regarding development as essentially an additive process rather than one involving relational changes in the structure of the child's psychological world.—*F. L. Goodenough* (Minnesota).

3941. Hilgard, E. R., & Humphreys, L. G. The effect of supporting and antagonistic voluntary instructions on conditioned discrimination. *J. exp. Psychol.*, 1938, 22, 291-304.—Simple conditioned eyelid responses were established in human subjects by presenting a visual stimulus followed by an air-puff to one cornea. Discriminatory conditioned eyelid responses were developed during a second and third experimental period by presenting another visual stimulus without reinforcement in random order with the previous stimulus, which was always reinforced. In addition to a control group without voluntary instructions, three groups were studied under different instructions, as follows: one group was instructed to respond to the positive stimulus, to refrain from response to the negative; a second attempted to respond to the negative stimulus, not to the positive; a third attempted to refrain from responding to either stimulus. Efforts at voluntary restraint did not suffice to prevent conditioning, but conditioned responses were shown to be modified by the voluntarily induced sets.—*E. R. Hilgard* (Stanford).

3942. Honzik, C. H. Exteroceptive stimuli and the relative difficulty of maze blinds. *J. comp. Psychol.*, 1938, 25, 355-372.—Analysis of the author's previous data on sensory control of the maze habit in rats was undertaken with a view to discovering in what way general and specific changes in exteroceptive stimulation influence the order of difficulty of blind alleys. Correlations and other data indicate that, although stimulus changes made after learning had a disrupting effect upon the maze habit, the distribution of errors remained about the same. Error distribution was affected more by changes in specific parts of the maze than by changes which involved the entire situation. Alley and

elevated mazes of the same pattern produced similar error distributions. The order of difficulty of blinds when food was at the end of the labyrinth correlated from .49 to .92 (average .70) with the order of difficulty when food was not present. The author concludes that "exteroceptive stimuli and the external factors designated by food-direction and centrifugal swing cannot account for a very large part of differential error distribution, the evidence suggesting the major importance of internal factors that function in conjunction with the spatial arrangement of blinds, or maze pattern."—*N. L. Munn* (Peabody).

3943. Horst, L. v. d. Over opmerkzaamheid. (Attention.) *Ned. Tijdschr. Psychol.*, 1938, 5, 421-432.—Whether an event will be in the center of our attention depends on its inherent vividness, the extent to which it is repressed by other events, and our volition as expressed in active concentration. Attention intensifies the psychic event, increases the psychic tempo, prolongs the duration of the psychic reaction, re-arranges the total aspect of consciousness, interferes with peripheral perception, and eliminates emotions. Attention is attracted by great intensity, strong affective moments, and novel contents, but sustained attention involves medium intensity, internal unity of content, and personally significant content. The measurement of attention and various conditions of fluctuation are discussed.—*H. Beaumont* (Kentucky).

3944. Hovland, C. I. Experimental studies in rote learning theory. II. Reminiscence with varying speeds of syllable presentation. *J. exp. Psychol.*, 1938, 22, 338-353.—32 subjects learned lists of 12 nonsense syllables by the anticipation method, at 2-second and 4-second rates of presentation. Following three degrees of learning, reminiscence was studied for the two presentation speeds by comparison of recall and relearning, with and without a 2-minute period of color naming. Following a single presentation of the list of syllables at the 2-second rate, more syllables were remembered after 2 minutes of color-naming than immediately following learning. With the 4-second rate fewer syllables were recalled after 2 minutes than immediately following learning. When learning at the 2-second rate was carried to the criterion of 7 out of 12 syllables correct, the introduction of a rest pause improved recall, decreased relearning trials, and resulted in fewer trials to go from 7 syllables correct to mastery. Reminiscence under these conditions was much reduced with the 4-second presentation, the recall scores being actually lower following the rest pause. Following the first perfect recitation trial, the rest pause served to improve both relearning and recall when learning was at the 2-second rate, but to cause a decrease in recall and an increase in number of relearning trials with the 4-second rate. Results are explained in terms of the theory of removal of inhibition.—*H. W. Karn* (Pittsburgh).

3945. Hovland, C. I. The generalization of conditioned responses: II. The sensory generaliza-

tion of conditioned responses with varying intensities of tone. *J. genet. Psychol.*, 1937, 51, 279-291.—Using as the conditioned response the galvanic skin reaction measured by the method of Tarchanoff, generalization was studied with tonal stimuli. To hold constant the effect of intensity per se, one group of subjects was conditioned to the weakest intensity and an equated group to the strongest intensity of tone. The results of the two groups were pooled to determine the generalization gradient as independent of the intensity effect per se. The gradient of generalization shows the same general form as that for frequency generalization, but is less steep. Almost complete generalization with respect to intensity is indicated. Many parallels between such generalization and retroactive inhibition suggest that the two may be integrated by theoretical analysis. Pavlov's theory of generalization is completely inadequate to the facts of intensity generalization. Guthrie's theory covers this form of generalization, but is difficult to test crucially.—*E. Heidebreder* (Wellesley).

3946. Jalota, S. S. A comparative study of the intelligence scores of first year boys and girls. *Indian J. Psychol.*, 1937, 12, 201-206.—The paper presents the results of testing 115 girls and 158 boys in the first-year classes of various college at Lahore in 1933. A battery of nine tests was used. It was found that when all factors are taken into account "it would be hazardous to hold any definite judgment in favor of the superiority of either sex." Detailed tables of results are included.—*L. A. Averill* (Worcester Teachers College).

3947. Kastein, G. W. De sociologie van het denken. (The sociology of thinking.) *Mensch en Maatsch.*, 1938, 14, 81-97.—Affective factors may be subjected to rational thinking, but can never be instruments of the scientific process. The role of intuition and imagination as auxiliary means of conceiving hypotheses must not be underestimated, but the result at best represents a working hypothesis, never a scientific fact. Science becomes impossible when its objectivity is in jeopardy, as is the case in certain philosophical systems. There appears to be a close relationship between socioeconomic conditions and the appearance of such philosophies.—*H. Beaumont* (Kentucky).

3948. Keller, F. S. A new type of alternation. *J. genet. Psychol.*, 1937, 51, 454-459.—A new type of temporal maze is pictured and described. Experimental results, though not offered as conclusive, suggest that mastery of double alternation may be more readily attained by rats when the possibility of simple alternation of the LRLR type is absent.—*E. Heidebreder* (Wellesley).

3949. Konorski, J., & Miller, S. W sprawie samoistnego przekształcania się nawyków. (Concerning the spontaneous change of habituations.) *Polsk. Arch. Psychol.*, 1936/37, 9, 68-80.—Making use of a maze with movable walls, the authors found that in the given experimental conditions it was impossible to discover in rats any spatial orientation,

for the behavior of these animals in the maze could be interpreted as learned.—*S. Blachowski* (Poznań).

3950. **Lamson, E. E.** To what extent are intelligence quotients increased by children who participate in a rich, vital school curriculum? *J. educ. Psychol.*, 1938, 29, 67-70.—The evidence from this study indicates that IQ's, as measured by the Stanford revision of the Binet-Simon intelligence scale, of 141 children who have completed the fourth grade of the demonstration school at the State Teachers College, Jersey City, have not been increased by participation in a rich and vital school curriculum.—*H. W. Karn* (Pittsburgh).

3951. **Lemmon, M. L.** A psychological consideration of analogy. *Amer. J. Psychol.*, 1938, 51, 304-356.—The problem of the present study was to analyze the processes of analogizing. Proverbs, cartoons, and simple word relationships were used. S was instructed to report in functional terms. The results show that there appears to be a function which the author calls "symbolizing," and which consists essentially in reading a figurative and generalized meaning into the perceived sentence-object's literal meaning. Symbolizing seems to be facilitated by increasing the number of symbolic products. There was no evidence for a psychological product which might be called a relation, apart from the terms related.—*D. E. Johannsen* (Skidmore).

3952. **Locke, E. S.** Perceptual factors in motor learning. *J. Psychol.*, 1938, 5, 157-164.—A review of the experimental evidence since 1931 leads the writer to conclude that "learning increases in efficiency as the sensory and perceptual cues are increased. This must mean that the individual has more indications of success or failure at his command at the beginning of the learning problem."—*J. McV. Hunt* (Brown).

3953. **Longwell, S. G.** Progressive change in simple action; a study of learning. *Amer. J. Psychol.*, 1938, 51, 261-282.—An attempt was made to select tasks which were simple (so that the process of acting could be described) and yet not highly practiced, and hence automatized. The 3 tasks selected were: (1) catching rolling balls, (2) duplicating silhouette figures, and (3) tracing reflected patterns. Functional reports were required at various stages in the learning process. "The successive phases of acting have been found to evolve from, and to be describable in terms of, a wide variety of interrelated functional moments. The task variously appears, determination develops out of many factors, and the whole leads on to motor resolution and accomplishment. Functional modifications brought about by repetition have taken the two general directions of expansion and reduction. The final result has been described as a unified, stable, and highly integrated performance."—*D. E. Johannsen* (Skidmore).

3954. **Loucks, R. B.** Studies of neural structures essential for learning. II. The conditioning of salivary and striped muscle responses to faradization of cortical sensory elements, and the action of sleep

upon such mechanisms. *J. comp. Psychol.*, 1938, 25, 315-332.—The writer's previous work had shown that faradization of the motor cortex is inadequate as a basis for developing conditioned movement of a limb. In the present investigation he was successful in conditioning salivary and withdrawal reactions by associating faradization of the visual cortex with presentation of acid or a shock to the limb, respectively. Food satiation was followed by a greater decrease in salivary responses based upon food than in those based upon acid. One dog exhibited differential conditioned responses to cortical shock and auditory stimuli. Sleep led to a difference in the thresholds for conditioned muscle and salivary responses, the later responses having the higher threshold.—*N. L. Munn* (Peabody).

3955. **Loucks, R. B., & Gantt, W. H.** The conditioning of striped muscle responses based upon faradic stimulation of dorsal roots and dorsal columns of the spinal cord. *J. comp. Psychol.*, 1938, 25, 415-426.—The unconditioned stimulus was a shock applied directly to the afferent fibers of the cord, while the conditioned stimulus was the sound of a buzzer. The subjects were five dogs. Stimulation was by means of a buried coil. The authors believe that their method made it possible to elicit a reflex limb movement with or without activation of pain fibers. The data suggest that unless nociceptive fibers are activated conditioning fails to occur. "An unconditional stimulus which leads to reflex movement without exciting nociceptive neurones, or others of a similar category, seemingly constitutes an inadequate basis for establishing a conditional avoiding movement." In a footnote Gantt points out that his conclusions differ from the above (formulated by Loucks). Several plates reproduce parts of the conditioning records.—*N. L. Munn* (Peabody).

3956. **Maier, N. R. F.** A further analysis of reasoning in rats. II. The integration of four separate experiences in problem solving. *Comp. Psychol. Monogr.*, 1938, 15, 1-43.—The aim was to determine whether rats are "capable of integrating and reorganizing as many as four experiences," and if so to discover the bases and characteristics of the behavior. Each of the 56 rats was given contact with four separate sections of an indirect pathway to food. The rats were then given an opportunity to solve a problem requiring integration of the four separate "experiences." The route to food was different in each daily test. Scores were far above chance expectancy. Individual differences in performance were observed and are analyzed in detail. Memory of the previous day's performance hindered solution. The evidence indicates that learning was in a forward rather than in a backward direction. Animals under seven months did not solve the problems. Rats nine months old were successful providing they had been given previous experience. Previous experience was not necessary for solution by rats of thirteen months. "There is evidence that the more capable animals are under a tension . . . created by the problem situation." Previous criti-

cisms of the writer's view that his problems measure reasoning are discussed. Extensive bibliography.—*N. L. Munn* (Peabody).

3957. Maier, N. R. F. A further analysis of reasoning in rats. III. The influence of cortical injuries on the process of "direction." *Comp. Psychol. Monogr.*, 1938, 15, 44-85.—The author postulates two functions in reasoning, viz., (1) reorganization of two or more isolated experiences, and (2) direction, a selective process which determines the nature of reorganization. This study aimed to determine the effect of cortical injuries upon the latter process. Of two groups, one was given direction before cortical injury and the other was, if possible, to develop it after similar injuries. Lesions ranged from 7.4 to 31.9% of the cortex (average 16%). Two reasoning tests, a simple and a complex, were used. Most of the animals were confronted with both problems. Animals given training prior to the operation made significantly larger scores than could be expected by chance, whereas the other group exhibited approximately chance accuracy. This difference cannot be attributed to a difference in cortical lesions, which were alike in all respects for both groups. It is concluded that a direction process which was set up before operation survived the brain injury, but could not be established in the absence of sufficient cortical tissue. There is a discussion of the nature of direction as indicated by the data of the present experiment. Bibliography.—*N. L. Munn* (Peabody).

3958. Makhdum, M. M. The concept of learning. *Indian J. Psychol.*, 1937, 12, 211-213.—The author examines Cason's definition of learning, and suggests a modification of it inasmuch as changes in the central nervous system and the phenomenon of consciousness, both implicit in Cason's definition, are not essential to a definition of learning.—*L. A. Averill* (Worcester Teachers College).

3959. McDougall, W. Fourth report on a Lamarckian experiment. *Brit. J. Psychol.*, 1938, 28, 321-345; 365-395.—The author describes further experiments on the inheritance in rats of the ability to learn to choose the dark and avoid the brightly lighted and electrified route out of a water tank, including the effect of selecting the best and the worst performers from each generation and breeding from them. McDougall confirms his previous conclusions as to the existence of Lamarckian inheritance, and replies to the criticisms of Crew, T. H. Morgan, H. S. Jennings, and others.—*M. D. Vernon* (Cambridge, England).

3960. McDougall, W. Une expérience lamarckienne à résultats positifs. (A Lamarckian experiment with positive results.) *J. Psychol. norm. path.*, 1937, 34, 413-425.—This is the report of an experiment using rats in a water maze, carried on for 38 generations, which shows inheritance of acquired characteristics. In answer to the criticism that his results might be due to selection, the author ran two other groups of rats, the ancestors of one group chosen because they were least successful on the

maze and those of the other group being the best rats. The results here also upheld his Lamarckian contentions. The criticism that the improvement might be due to a social transmission is discussed and likewise disposed of.—*R. E. Perl* (New York City).

3961. Minut-Sorokhtina, O. P. [On the question of the neurodynamics of the electrocutaneous conditioned reflex.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 85-100.—The fundamental stimulus in the electrocutaneous methods is considered to be a complex factor consisting of visual, kinesthetic and electrocutaneous excitations. The change of each member can give a change of the structure of the conditioned reflex or even a substitution of one reflex for another.—*A. Yarmolenko* (Leningrad).

3962. Minut-Sorokhtina, O. P., & Posisoeva, E. A. [Destruction of differentiation in various types of conditioned reflex activity.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 101-114.—The formation of a second conditioned reflex on a differentiated stimulus is much easier than the formation of the primary one. The final result of a destruction of differentiation is not connected with the type peculiarities of the conditioned reflex activity. The break of differentiation can be found in all types.—*A. Yarmolenko* (Leningrad).

3963. Odinzova, L. S. [The behavior of children in connection with the type and the background of conditioned reflex activity.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 179-212.—*A. Yarmolenko* (Leningrad).

3964. Pax, W. T. A critical study of Thorndike's theory and laws of learning. *Cath. Univ. Amer., educ. Res. Monogr.*, 1938, 11, No. 1. Pp. 175.—The author approaches his problem on the basis of a survey of modern theories of learning and the general philosophical assumptions of connectionism. "The telling weakness of the S-R bond theory as an explanation of the learning process is the lack of a principle of unity. The picture of mental life that Thorndike presents is a series of fractions from which the denominators have been omitted." "We do not get at the essentials of the learning process by discovering the least possible factors necessary for any kind of learning, but by studying learning in all its manifestations, higher as well as lower." "Behind the performance which is open to observation and measurement there is not only the activity of a living brain but the activity of a participating individual who is intent upon mastering the situation, who is pleased when his efforts are successful and displeased when his energy is wasted in failure."—*W. S. Hunter* (Brown).

3965. Pickford, R. W. An experiment on insight. *Brit. J. Psychol.*, 1938, 28, 412-422.—15 subjects were asked to find the common feature (a right angle) in 14 members of a series of 27 simple straight-line figures. The subject pressed the left ("no") or the right ("yes") key in front of him, and if correct a bell rang; the subject knew that this would occur.

The statistical results reverse the conclusions of a similar experiment by J. I. Drever, in which a strong tendency to press the correct key was found before the subjects had conscious insight. Study of the individual responses and of the reasons given for them supports Drever's conclusion in that insight seems to develop by steps some of which are not conscious. Large differences in the suddenness of insight were found. The pre-insight period seemed to be occupied not by random trial and error but by hard directed thinking.—*M. D. Vernon* (Cambridge, England).

3966. Pieter, J. *Badania nad czynnikami warunkującymi zróżnicowanie ilorazów inteligencji dzieci i młodzieży.* (An investigation of the factors conditioning the differentiation of intelligence quotients of children and youths.) *Polsk. Arch. Psychol.*, 1936/37, 9, 81-102.—The significance of the same intelligence quotients is different if they concern persons coming from different social milieus. We should calculate for each person his environmental coefficient, and by dividing his intelligence quotient by this environmental coefficient determine his quotient of natural intelligence.—*S. Blachowski* (Poznań).

3967. Porter, E. H., Jr., & Hall, S. C. A further investigation of the role of emphasis in learning. *J. exp. Psychol.*, 1938, 22, 377-383.—Two groups of subjects (30 in each group) practiced a simple learning task consisting of making a series of choices between a pair of telegraph keys. For one group either a correct or an incorrect response was followed by flashing a light above the correct key. For the other group either a correct or an incorrect response was followed by flashing a light above the incorrect key. The members of each group acted as subjects under both experimental conditions. In each case flashing a light over the correct key facilitated learning more than flashing a light over the incorrect key.—*C. S. Hall* (Western Reserve).

3968. Ryan, T. A. *Mathematical objects and symbolizing.* *Amer. J. Psychol.*, 1938, 51, 283-303.—"We have defined *symbolizing* quite specifically as a transition in which the organism is governed by one object or product of activity in producing another object of a certain different order. Couched entirely in psychological terms, the definition is without logical or epistemological implication." The materials used were sentences stating mathematical or logical relations, presented visually, and about which S was required to report in terms of the products. An analysis of the results showed that, besides symbolizing (which occurred rarely), the sentences were "understood" in other ways: translation, comment, linguistic objects, mathematically characterized objects. Although all these forms are logically of the same status, psychologically they are quite different. "Through symbolizing and in linguistic objects the organism produces topics; in the one the spatial-temporal pattern is a part of a product, in the other it is an independent product."—*D. E. Johannsen* (Skidmore).

3969. Skeels, H. M. *Mental development of children in foster homes.* *J. consult. Psychol.*, 1938, 2, 33-43.—Results of a study of the mental development of 147 children placed in foster homes when under 6 months of age show that: (1) the mean intelligence level is higher than would be expected for children coming from the educational, socioeconomic and occupational levels represented by the true parents; (2) there is a zero correlation between the true mother's IQ and that of the child; (3) the mental level of the children compares favorably with that reported by other investigators for children of similar age from superior occupational levels. The article is preceded by a portrait of R. S. Woodworth.—*P. S. de Q. Cabot* (Simmons).

3970. Sorokhtin, G. N. [Neurodynamics of the type of conditioned reflex activity in children.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 53-84.—*A. Yarmolenko* (Leningrad).

3971. Sorokhtin, G. N. [Somatic characteristics of the type of conditioned reflex activity.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 133-148.—*A. Yarmolenko* (Leningrad).

3972. Sorokhtin, G. N., & Minut-Sorokhtina, O. P. [Types and background of conditioned reflex activity in children of junior school age.] In Various, [Types of conditioned reflex activity in children]. Moscow: 1936. Pp. 9-52.—*A. Yarmolenko* (Leningrad).

3973. Spooner, G. M. *The learning of detours by wrasse (Ctenolohrus rupestris L.).* *J. mar. biol. Ass. U. K.*, 1936, 21 (N. S.), 497-570.—11 fish were trained to swim around obstructions to obtain food, in order to investigate how their learned response was developed. They learned a detour route either into a pot or around glass plates. There were great variations in the individual behavior of the fish. It was not possible to predict from the behavior in early trials that a response would be learned later on, or, if established, what particular movements would be involved. Connectionist hypotheses are rejected in the explanation of the data, and the learning is said to be associated with "the synthesizing, or organizing, processes which must be assumed to occur in the sensory centers of the central nervous system." The conclusion reached is that "learning is essentially due to the discrimination of some general relation in the external situation which had not previously been prehended. With a clearer appreciation of its surroundings the fish is enabled to give a more effective response."—*C. N. Cofer* (Brown).

3974. Thomson, G. H. *The influence of univariate selection on the factorial analysis of ability.* *Brit. J. Psychol.*, 1938, 28, 451-459.—Factorial analyses, by whatever method they are conducted, depend upon a matrix of correlations or covariances; and these vary with the sample of persons to whom the tests are administered. Thus factorial analysis depends upon the population of persons from whose scores the correlations are calculated. The author

calculates the effect of this selection mathematically.—*M. D. Vernon* (Cambridge, England).

3975. *Tomaszewski, T.* *Geneza oceny niedorzeczności.* (Genesis of estimations of nonsense.) Lwów: Gubrynowicz, 1936. Pp. 49.—On the basis of individual and collective investigations in which the persons to be investigated were given texts to be estimated as to their nonsense, the author comes to the conclusion that an estimation of the nonsense of a text depends on what the reader is expecting in advance when he approaches the text. The text itself does not possess any objective characters which permit it to be qualified as absolutely nonsensical. Only an agreement of the text with the expectation decides as to the estimation.—*S. Blachowski* (Poznań).

3976. *Trendelenburg, W. J. P.* *Pawlows Lehre von den Verrichtungen des Grosshirns.* (Pavlov's theory of cerebral activities.) *Abh. preuss. Akad. Wiss.*, 1937, No. 1. Pp. 66. RM 4.—Pavlov's theory of the conditioned reflexes as the basis of cerebral activities originated from his pioneer studies of the working of the digestive glands. Salivary secretions became a sign that a new stimulus had been included in the brain activity. Pavlov's idea that the behavior of higher animals can be expressed in purely objective concepts is too one-sided. His highly speculative application of his results to human society must be rejected. However, his findings represent a most significant contribution to comparative physiology and psychology, regardless of his interpretations. The author attempts to evaluate Pavlov's results subjectively and relate them to human phenomena.—*W. Trendelenburg* (Berlin).

3977. *Trowbridge, M. H.* *A study of backward and remote forward association.* *J. exp. Psychol.*, 1938, 22, 319-337.—In this study of remote association in serial learning subjects typed series of consonants, and the amount of learning was measured by improvement in speed and accuracy. The advantage of the procedure was that subjects were not tempted to uncontrolled rehearsals of the material. In the first test, before practice, subjects typed 3 series of consonants which had been made equal in difficulty. In the practice period they typed practice material containing one series reversed (backward), one series with an interpolated letter between each consonant (remote forward), and one series in random order (control). A second test period, exactly like the first, followed immediately after practice, and a third 24 hours later. Two experimental procedures were used, the second differing from the first only in having a much longer practice period. 40 subjects were used with the first procedure, 9 with the second. Results were against the presence of both backward and remote forward association; there was no evidence that time of retest was significant; and a longer practice period did not result in evidence for remote association.—*M. H. Trowbridge* (Wisconsin).

3978. *Veletzka, N. P.* [Motor functions of children in connection with the type of the condi-

tioned reflex activity.] In Various, [*Types of conditioned reflex activity in children*]. Moscow: 1936. Pp. 149-178.—*A. Yarmolenko* (Leningrad).

3979. *Weber, L.* *Pensée symbolique et pensée opératrice.* (Symbolic thought and direct thought.) *Bull. Soc. franc. Phil.*, 1935, 35, 177-210.—The author explains the difference between the symbols of terms in ordinary language and those in mathematics.—(Courtesy *Année psychol.*).

3980. *Wells, F. L.* *Psychometric practice in adults of superior intelligence (III).* *Amer. J. Orthopsychiat.*, 1938, 8, 79-94.—Practice experiments in which 3 tests (Thurstone syllogisms, Kuhlmann opposites, and Kraepelin additions) were employed yielded transfer phenomena of 3 sorts. Intensive studies of relatively few individuals, rather than generalizations from mass observations, are suggested because transfer phenomena exhibit individuality.—*J. McV. Hunt* (Brown).

3981. *Wingfield, R. C.* *A study in alternation using children on a two-way maze.* *J. comp. Psychol.*, 1938, 25, 439-443.—A group of 15 children failed to exhibit alternation behavior previously found in rats. Only 27 out of a possible 90 alternations occurred. Various possible explanations of this difference in the behavior of rats and children are suggested. Bibliography.—*N. L. Munn* (Peabody).

3982. *Yerkes, R. M., & Spragg, D. S.* *La mesure du comportement adapté chez les chimpanzés.* (The measure of adaptive behavior in chimpanzees.) *J. Psychol. norm. path.*, 1937, 34, 449-475.—The authors describe the plan of research of the laboratories for primate biology at Yale University. They discuss in detail the experimental method and the results attained by 4 chimpanzees on 8 tests. They conclude that the different tests differ greatly in their value for classifying the subjects in respect to adaptive capacity. They also point out that the results must be interpreted in relation to the ages of the animals, that certain tests are too easy to permit differentiation, and that others are of limited applicability because they are too difficult. However, they feel that they have partially attained their goal of evaluating and classifying their subjects and think that the work should be continued.—*R. E. Perl* (New York City).

3983. *Youtz, R. E. P.* *Reinforcement, extinction, and spontaneous recovery in a non-Pavlovian reaction.* *J. exp. Psychol.*, 1938, 22, 305-318.—"Learning by reward" (Thorndike et al.) was examined in terms of 3 Pavlovian characteristics. 18 rats learned to depress a small bar when a pellet of food was the reinforcement (reward) for each depression, half of the rats receiving 40 reinforcements and half receiving 10. The response was then extinguished (by non-reinforcement) on three successive occasions. During acquisition there was a decrease in latency and an increase in frequency. At the first extinction the 40-reinforcement rats made a reliably greater ($D/\sigma_D = 3.19$) number of responses than the 10-reinforcement group. Contrary to the law of disuse, spontaneous recovery occurred during

intervals of 24 hours and 55 days. Decreasing numbers of responses were made during successive extinctions. In terms of the variables considered, this Thorndikian type of reaction showed a functional similarity to the conditioned response.—R. E. P. Youtz (Barnard).

[See also abstracts 3790, 3850, 3881, 3984, 3998, 4004, 4013, 4041, 4065, 4079, 4084, 4170, 4213, 4275, 4361, 4371, 4374, 4412.]

MOTOR AND GLANDULAR RESPONSES (incl. Emotion, Sleep)

3984. Abel, T. M. The influence of social facilitation on motor performance at different levels of intelligence. *Amer. J. Psychol.*, 1938, 51, 379-389.—Two groups of girls (CA 15-16 years) were required to trace the pathway of a pencil maze which had no blind alleys. The IQ's of the first group were between 50 and 59 (Otis intermediate self-administering examination), those of the second between 70 and 79. The S's practiced for 4 periods, performing 20 trials at each period. At some periods the S's worked alone; at others they worked in pairs. The results of the first period were discarded, as well as the first trial at each subsequent period. Two months later the experiment was repeated, except that only 3 periods were used. All groups profited consistently from working in pairs, the group with the higher IQ's profiting more than that with the lower. More frequent social stimulation in an initial series made for superior performance in a later series, even without social stimulation. It is felt that both ideomotor activity and competitive attitudes influence the results, but that something additional is needed to explain the differences between the two intelligence levels. It is suggested that such an explanation is to be found in the greater rigidity in adapting to a new situation (and the greater egocentrism) of the lower intelligence group.—D. E. Johanssen (Skidmore).

3985. Alam, M., & Smirk, F. H. Observations in man on a pulse-accelerating reflex from the voluntary muscles of the legs. *J. Physiol.*, 1938, 92, 166-177.—Exercising a leg deprived of its circulation by means of a sphygmomanometer cuff causes an accumulation of metabolites. The metabolites initiate discharges of nerve impulses from the leg muscles which result in reflex acceleration of pulse, increase of blood pressure and pain. The pulse and blood pressure effects precede the pain, indicating that they are not dependent upon the conscious perception of pain.—M. A. Rubin (Worcester State Hospital).

3986. Allard, H. A. Some observations on the behavior of the periodical cicada, *Magicicada septendecim* L. *Amer. Nat.*, 1937, 71, 588-604.—The course of development from the appearance of the emergence holes to the attainment of adulthood is described. The males are the musicians, and their behavior in producing the music is described. Their hearing is very sensitive. Oviposition is also described.—C. N. Cofer (Brown).

3987. Baxter, B., & Travis, R. C. The reaction time to vestibular stimuli. *J. exp. Psychol.*, 1938, 22, 277-282.—The problem of this study was to determine the reaction time of voluntary response to the perception of passive rotary motion of the body with visual and auditory cues either masked or removed. Results are summarized as follows: (1) The average vestibular reaction time to passive body motion was 0.598 second, and the range from 0.190 to 1.79 second. (2) The reaction time to successive oscillations was reliably slower than the reaction time to discrete movements, probably due to the peculiarities of the vestibular system. (3) The reaction time to the left was 0.002 second slower than the reaction time to the right (.599 to .597), which was not significant. (4) The reaction time for men appeared to be shorter than that for women, though the results are not statistically significant.—H. W. Karn (Pittsburgh).

3988. Beam, S. F. The irritable colon and its complications. *Radiolog. Rev. Miss. Vall. med. J.*, 1938, 60, 14.—High nervous tension and sedentary habits, created by modern civilization, have produced the condition of irritable colon. Gastro-intestinal upsets occur in varying degrees in persons under great nervous or emotional strain. The equilibrium of the autonomic system, with its two components, is easily upset by such strain. Prolonged stimuli produce pathological conditions, as exemplified by mucous colitis, diverticula of the colon, etc. Beam discusses the treatment of such conditions by diet, etc.—W. Marshall (Appleton Clinic, Wis.).

3989. Berk, L., Cheetham, R. W. S., & Shapiro, H. A. The biological basis of sexual behavior in *Amphibia*: III. The role of distance receptors in the establishment of the mating reflex (coupling) in *Xenopus laevis* (South African clawed toad): the eyes. *J. exp. Biol.*, 1936, 13, 60-63.—This is the third of three articles reporting and discussing characteristics of the mating reflex of the South African clawed toad as experimentally induced by injection with extract of the anterior pituitary, or of pregnancy urine. In the experiments here reported pairs of toads (male and female) were injected with a preparation of early pregnancy urine, and 33 pairs which thereupon exhibited the mating reflex were divided into three groups. In the first group (15 pairs) the eyes of the male were removed; in the second (13 pairs) the eyes of the female were removed; in the third (5 pairs) the eyes of both partners were removed. A second injection of extract was given at the time of the operation, which was without shock effects, all animals remaining in good condition. Abnormal clasping by the male of the female's hind or fore limbs instead of the lumbar region, a form of embrace seldom seen in normal animals, was frequently observed in all the eyeless males. Ultimately, however, the abnormal clasping gave place to the normal lumbar embrace. The authors conclude that "the eyes may play an unimportant role in facilitating adoption of the lumbar embrace." Two references.—C. K. Trueblood (Harvard).

3990. Bernstein, N. A. Issledovaniya normalnoi i patologicheskoi lokomotoriki. (Studies of normal and pathological locomotion.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 61-62.—A review of selected aspects of the literature.—L. J. Stone (Sarah Lawrence).
3991. Bissonnette, T. H., & Csech, A. G. Hatching chicks on Christmas day. *Amer. Nat.*, 1937, 71, 525-528.—One cock pheasant and four hens, 151 days of age, were subjected to gradually increased night lighting from October 5 to December 5. By October 13 the cock assumed breeding plumage and head furnishings, began to give the mating call, and began to tread and copulate with at least two of the hens. His behavior and that of the hens indicate that at least their secondary sexual characters and performance were already responding to increased daily periods of light. One hen laid eggs, and of these 50% showed signs of fertilization and 30% hatched. Thus both sexes were completely activated at 185 days of age, with chicks hatched 138 days earlier than normally.—C. N. Cofer (Brown).
3992. Browman, L. G. Light in its relation to activity and estrous rhythms in the albino rat. *J. exp. Zool.*, 1937, 75, 375-388.—The daily activity rhythm of rats exposed to continuous light is a periodic fluctuation (5-6 days) between nocturnal and diurnal activity. Reversal of night-day light causes reversal in rhythm, but rats in total darkness tend to keep the activity rhythm with which they entered the period of darkness. Rhythms in animals in adjoining cages do not influence each other. Vaginal smears showed that continuous light led to continuous vaginal cornification for longer than 5 days. Complete blindness led to typical nocturnal activity rhythms regardless of light conditions. Three generations of rats raised under continuous light conditions showed no typical change in time of opening eyes, age at first litter, etc.—L. Carmichael (Rochester).
3993. Brown, C. H. Emotional reactions before examinations: III. Interrelations. *J. Psychol.*, 1938, 5, 27-31.—Included in all the questionnaires (see XII: 3448) was Willoughby's Clark revision of the Thurstone personality schedule. The scores on the questionnaire correlated $.28 \pm .05$ with neurotic tendency. No correlation was found between the degree of changes in the physiological measures studied (see XII: 3449) and the emotional questionnaire. The partial correlation between the emotional questionnaire and grades with intelligence held constant was $-.19 \pm .05$, while the partial correlation between neurotic tendency and grades with intelligence held constant was $.00$. With the questionnaire revised so that it can be applied to one examination, the author believes the correlation between the questionnaire and achievement will be much higher.—E. D. Hunt (Brown).
3994. Bull, N. The dual character of fear. *J. Psychol.*, 1938, 5, 209-218.—Fear is considered to be primarily bound up with uncertainty as to the exact nature of the danger stimulus, and therefore as to how to react to it. This theory takes fear out of its customary grouping as one of the major emotions, makes of it the subjective aspect of conflicting intentions, and gives it a unique position in a sequence beginning with startle and culminating in adaptive behavior. Anxiety, complexes, and neurosis are related to this conception of fear, and their basis in conflict is considered frequently to be a divided attention.—J. McV. Hunt (Brown).
3995. Burger, J. W. Experimental photoperiodicity in the male turtle *Pseudemys elegans* (Wied). *Amer. Nat.*, 1937, 71, 481-487.—Increased illumination (3 to 7 hours daily) in which male turtles at the crest of the spermatogenic cycle were living caused an inhibition of this cycle and the beginning of a new one. Controls kept in a cool, dark room and others kept in normal daylight did not show the same changes. More experiments to evaluate the relative effects of light and temperature are planned.—C. N. Cofer (Brown).
3996. Coombs, C. H. Adaptation of the galvanic response to auditory stimuli. *J. exp. Psychol.*, 1938, 22, 244-268.—In this study the author investigated the relations of startle, affectivity, and the time interval between auditory stimuli to galvanic adaptation. Major conclusions are as follows: (1) Galvanic adaptation proceeds rapidly at first and then slows down as the responses approach a more or less constant level. (2) Galvanic adaptation takes place more rapidly with a 15-second interval than with a 30-second interval between stimuli. (3) With successive presentations of the same auditory stimulus there is a shift of the absolute affectivity value toward unpleasantness, while the startle value shifts toward "no startle" at first and then appears to creep back a little. (4) A relationship is established between the mean startle rating of a stimulus, its mean deflection, and its absolute response decrement. (5) A relationship is established between the relative mean startle decrement of a stimulus and the relative response decrement. (6) The mean affectivity rating of a stimulus appears to be related to the mean startle rating. (7) Galvanic adaptation to auditory stimuli is in part general and in part specific to the stimulus. An hypothesis is presented as to the nature of the factors underlying transfer of adaptation.—H. W. Karn (Pittsburgh).
3997. Ebbecke, U., & Remberg, H. Über elastische Eigenschaften des Kautschuks in ihrer Beziehung zum Muskel. (The elastic properties of rubber bands compared with muscle.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 137-154.—M. A. Rubin (Worcester State Hospital).
3998. Fischel, W. L'émotion et le souvenir chez les animaux. (Emotion and memory in animals.) *J. Psychol. norm. path.*, 1937, 34, 376-397.—The significance of emotion and memory in different animals is classified under the heads: (1) emotion as the result of an implied remembrance, and (2) emotion as the result of a free remembrance. The former is subdivided as follows: (a) impulsive, (b)

reaction learned without relation to goal, (c) reaction learned in relation to goal. The latter is subdivided into (a) impulsive, and (b) learned reactions. Each of these subdivisions is divided temporally into past causes and future causes. Animals are then cited which illustrate the different types of reaction.—R. E. Perl (New York City).

3999. Forti, E. *La nature de l'émotion.* (The nature of emotion.) *Rev. Métaphys. Morale*, 1936, 359-384.—The author defines emotion and points out the difference between inhibited and excited emotion.—(Courtesy *Année psychol.*)

4000. Goryński, L. *Rzut oka na współczesną "psychologię wyrazu."* (A survey of contemporary "psychology of expression.") *Polsk. Arch. Psychol.*, 1936/37, 9, 211-216.—Basing his essay mainly on Bühler's *Ausdrucks-theorie* (Jena 1933), the author sketches the development of the psychology of expression from its beginning in the *Physiognomics* ascribed to Aristotle up to recent times.—S. Blachowski (Poznań).

4001. Gunn, D. L., & Kennedy, J. S. *Apparatus for investigating the reactions of land arthropods to humidity.* *J. exp. Biol.*, 1936, 13, 450-459.—The apparatus is a chamber in the shape of an open ring, with a wet pocket at one end and a dry pocket at the other, and with hygrometers and thermometers at a series of points in the ring for control purposes. A terrestrial arthropod is introduced; the side to which it goes marks its preferential reaction from the point of view of the hygrometric rate. By changing the gradient of variation, it is possible to establish the value of the discriminative threshold.—M. G. Willoughby (Brown).

4002. Hall, C. S. *The inheritance of emotionality.* *Sigma Xi Quart.*, 1938, 26, 17-27; 37.—Individual differences in emotionality, measured by the number of days over which defecation and urination persisted when rats were put into an open field 7 feet in diameter, are shown to be inheritable. The progeny of the 7 most emotional male mated with the 7 most emotional female rats of a large heterogeneous group eliminated on the average significantly more (males 4 days, females 2.4 days) than the progeny of the 7 least emotional males mated with the 7 least emotional females (males 0.8 days, females 0.07 days). It was also found: (1) that males tended to be more emotional than females, (2) that emotional rats were less active, and (3) that they were less stereotyped in their behavior than non-emotional rats. Several hypotheses are presented. The significance of the results for psychotherapy is discussed, and the writer indicates a belief that although constitutional differences are modifiable, the degree of modification is limited and constitutional differences are of primary importance in the etiology of psychoses.—J. McV. Hunt (Brown).

4003. Havin, H. *Alkohol og reaksjonssikkerhet.* (Alcohol and accuracy of reaction.) In *Various, Festschrift til Anathon Aall.* Oslo: Aschehoug, 1937. Pp. 134-148.—Following essentially the same methods as used in the Danish experiments by P. Bahnsen,

K. Vedel-Peterson, and M. Schmidt (*Alcohol Studies: I. Experiments on Drivers of Motor Vehicles; II. Concentration of Alcohol in the Blood, J. Indus. Hyg.*, 1934, 16, Nos. 5, 6), the writer investigated the effect of different doses of alcohol upon complex reaction, a somewhat complicated cross-out test, etc. 10 male students were the subjects. No clear-cut results were obtained.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4004. Hertz, M. *La rapport de l'instinct et de l'intelligence dans le règne animal.* (The relation of instinct and intelligence in the animal kingdom.) *J. Psychol. norm. path.*, 1937, 34, 324-341.—It is difficult to find a dividing line between the simple psychological influences which are a result of the closeness of processes in space and time, and the appearance in perception of essential properties, the formulation of groupings which make possible the logical adaptation of instinctive actions. It is even more difficult, without great experience, to know, in a particular case, that which nature has already done to facilitate a determined action in a certain species, and that which the individual intelligence accomplishes itself. Is intelligence the liberation of the constraint of reflexes, or is reflex action the mechanization of earlier free action? After examining the behavior of many different kinds of animals, the best provisional conclusion is the admission of a large common root consisting of two types of function with a progressively divergent development which never leads to a complete separation between the two extremes of free action and compulsive action.—R. E. Perl (New York City).

4005. Heymanovich, A. I. [Ed.] *Problemy motoriki v nevrologii i psikiatrii.* (Problems of the motor sphere in neurology and psychiatry.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8.—24 papers presented at the 5th Congress of the Central Psychoneurological Institute dealing with motor activities and disorders under various normal and pathological conditions. Each paper is followed by a French and an English summary.—L. J. Stone (Sarah Lawrence).

4006. Hofer, G. *Über Erscheinungen im statischen Labyrinth bei Berufsbläsern.* (Phenomena in the static labyrinth among professional trumpeters.) *Wien. klin. Wschr.*, 1937, 50, Part 1, 724-725.—P. L. Krieger (Leipzig).

4007. Holst, E. v. *Neue Versuche zur Deutung der relativen Koordination bei Fischen.* (New experiments to explain relative co-ordination in fishes.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 1-43.—M. A. Rubin (Worcester State Hospital).

4008. Holst, E. v. *Über relative Koordination bei Säugern und beim Menschen.* (Relative co-ordination in mammals and in man.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 44-59.—The fore limbs of dogs and horses move with a higher frequency during locomotion than do the hind limbs. Slowing of fore-limb frequency is accompanied by an increase in hind-limb frequency, and vice versa. In man, the

rhythmic movement of one arm (with eyes closed) influences the rhythm of the other. The rhythm which one arm alone shows (absolute co-ordination) is influenced by the rhythm of the other arm (relative co-ordination). The site of co-ordination control is discussed.—*M. A. Rubin* (Worcester State Hospital).

4009. Hunt, W. A., & Landis, C. A note on the difference between the Moro reflex and the startle pattern. *Psychol. Rev.*, 1938, 45, 267-269.—Pratt's identification of the Moro reflex with the startle pattern is wrong, since the former is an extension response and the latter a flexion response. The former is slow, the latter immediate. The former is confined to the first few months of life, the latter persists throughout life.—*A. G. Bills* (Cincinnati).

4010. Jennings, H. S. Sex reaction types and their interrelations in *Paramecium bursaria*. I. *Proc. nat. Acad. Sci., Wash.*, 1938, 24, 112-117.—Members of two clones, *l* and *m*, belonging to two diverse sex-reaction types of *Paramecium bursaria*, were allowed to pair, and the sex reactions of the exconjugant clones were examined. It was found that, besides *l* and *m*, two other reaction types resulted from the union—one which united with both *l* and *m*, and another which clotted and paired not only with *l* and *m*, but with the third type as well. The clones produced from the exconjugants of *l* × *m* differed not only in sex type, but also in size, form, vigor, and readiness to react sexually.—*F. S. Keller* (Colgate).

4011. Jennings, H. S. Sex reaction types and their interrelations in *Paramecium bursaria*. II. Clones collected from natural habitats. *Proc. nat. Acad. Sci., Wash.*, 1938, 24, 117-120.—27 clones from two general localities in Maryland (23 clones) and Virginia (4 clones) were tested for sex type. None of the Maryland clones reacted with any of the four reaction types (see preceding abstract) of the Virginia group. Mixtures of each Maryland clone with the others led to the determination of five reaction types, none of which conjugated with any of the Virginia types. The findings are considered to point to the existence of local races, differing in sex-reaction type, which do not react with races from distant localities. With respect to sex differentiation it is suggested that "two definite sexes have arisen by gradual specialization among an originally large number of diverse reaction types."—*F. S. Keller* (Colgate).

4012. Kuo, Z. Y. Ontogeny of embryonic behavior in Aves. XII. Stages in the development of physiological activities in the chick embryo. *Amer. J. Psychol.*, 1938, 51, 361-378.—"This paper proposes (1) to summarize in a convenient and readable form the mass of data concerning the physiological activities of the chick embryo . . . (2) to revise from new material certain statements made in previous papers of this series, and (3) to attempt a division into developmental stages of physiological activity during embryonic weeks. . . . The development of the somatic activities of the chick embryo, from the beginning of heart-beat to hatching, has

been divided into ten stages. In each stage the chief events are described." The stages are summarized in a chart.—*D. E. Johannsen* (Skidmore).

4013. Laird, D. A. That menu for lunch. *Rotarian*, 1938, 52, 15-17.—The author finds that after a light meal at noon the eight college students used as subjects are 22% better in recalling memorized material, 25% more accurate in mental addition, and 6% better in speed of addition and speed of controlled thinking, than after a heavy meal. After heavy meals attention fluctuated 70% more than after light meals.—*F. G. Allen* (Brown).

4014. Lemoine, A. N. Ocular manifestations of endocrine disturbance. *Arch. Ophthalm., Chicago*, 1938, 19, 184-193.—A review of the parts played by the various glands in regulating metabolism and in controlling the activities of the autonomic nervous system. Explanations are indicated for the ocular manifestations associated with their hyperfunctioning and hypofunctioning. Additional alleged relationships between endocrine disturbances and ocular pathology are mentioned.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4015. Leshchenko, G. D., & Litvak, L. B. K probleme razvitiya dvigatelnykh aktov diferentsirovannogo ryada. (Contribution to the problem of differentiated movements.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 33-40.—In man global movements do not have the prevailing significance found by Coghill in the development of motility in *Amblystoma*. Nevertheless clinical indications of such globality can be noted in every reaction. The authors studied the development of differentiated finger movements in children, grasping representing global movement and pointing differentiated movement. A definite succession of both kinds of movements was found, beginning with grasping in infants. The appearance of Raymist's position of the hands, an incomplete pointing, in older children is emphasized by the authors. The tendency toward automatization of differentiated movements is held to be completed here by a newly described pointing (*Zeige*) synkinesis which was elicited in certain cases with cerebral lesions. The phenomenon is held to be of cortical and subcortical origin. A further stage of automatization is the so-called *Tast-Reflex*, consisting of groping movements of the first two fingers following percussion of the finger tips.—*L. J. Stone* (Sarah Lawrence).

4016. Lippay, F. Über die Komplexen Erregbarkeitsverhältnisse des Skelettmuskels bei elektrischer Reizung von den Enden aus. Zur Kenntnis der sog. α - und γ -Erregbarkeit. (The complex excitability conditions in skeletal muscle on electrical stimulation longitudinally. Understanding of the so-called α - and γ -excitability.) *Pflüg. Arch. ges. Physiol.*, 1938, 240, 221-262.—From chronaxy measurements it is concluded that the α -excitability of frog gastrocnemius muscle represents the excitability of the muscle fibers; the γ -excitability of muscle is that of the nerve fibers.—*M. A. Rubin* (Worcester State Hospital).

4017. Litvak, L. B. [The role of the position of the foot in human statics.] *Nevropat., Psikhiat. Psikhogig.*, 1936, 1865-1869.—The position of the foot is one of the main factors in human statics. The author proposes a method of classifying foot positions into two fundamental types, frontal and sagittal, which facilitates a description of even light and early phases of static disorders.—A. Yarmolenko (Leningrad).

4018. Litvak, L. B. *Lokálne i obščhie fenomeny opory v statike cheloveka.* (Local and general phenomena of posture in human equilibrium.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 110-130.—The method used in the clinic to study postural reflexes, consisting in changing the position of the distal segment of an extremity, is held to be inadequate. The author used a "natural" technique—pushing the patient as he stood erect. 45 patients with well differentiated nervous diseases were examined by this method. Three phases of postural response were distinguished: (1) the "column" reaction, consisting in general muscular contraction; (2) lifting the margin of the foot according to the direction of the push, the body weight resting on the other side of the foot; (3) shifting of the leg. These reactions are generally accompanied by related phenomena in other parts of the body, which, however, do not have the same generality as those described. Two groups of postural phenomena were further distinguished by the author: (1) The more primitive general reactions are most stable and disappear only in generalized degeneration of the brain with brain stem involvement. (2) More subtle and differentiated (and phylogenetically more recent) phenomena are chiefly of a local or segmental nature and may be observed in lesions of different levels of the central nervous system; such phenomena may be used clinically as early indicators of static disorders. Bibliography.—L. J. Stone (Sarah Lawrence).

4019. Lundholm, H. *Taste for affect-gain.* *Psychol. Rev.*, 1938, 45, 242-256.—Desire for affect-gain is defined as the desire to experience affect as an autotelic end. As such it is classed among the tastes for activities, which is a category of McDougall's tastes, as opposed to his sentiments, which are likes or dislikes for objects. The question is raised (if affect-gain constitutes a goal in itself) how the affect can be sought as pleasant. It is answered that the self-pity thus engendered gratifies the desire for self-esteem. This taste for affect-gain may be achieved on the level either of reality or of unreality, and hence can account for certain symptoms of mental disease and of psychopathic inferiority. There may be both directly excited and sympathetically excited affects. Hence this principle can explain the taste for watching exhibitions of cruelty, disseminating scandal, receiving sympathy, obtaining esthetic enjoyment, etc.—A. G. Bills (Cincinnati).

4020. Marshall, C. R. *The threshold of unconsciousness.* *Brit. J. Psychol.*, 1938, 28, 424-429.

—The experiment shows the increase of choice reaction time in the period intervening between inco-ordination and unconsciousness during the inhalation of nitrous oxide, ethylene, or acetylene; and describes the corresponding changes in mentality.—M. D. Vernon (Cambridge, England).

4021. Mies, H. *Labyrinth und Blutdruckzügler.* (The labyrinth and regulators of blood pressure.) *Z. Biol.*, 1936, 97, 218-228.—Labyrinthine excitation has no lasting action on pressure, but it involves a transitory rise conditioned by the regulating apparatus and a decline if this apparatus is eliminated. The depressive action of these regulators may be diminished or temporarily abolished by labyrinthine excitation.—(Courtesy *Année psychol.*).

4022. Moskowicz, L. *Biologische Grundlagen zum Problem des männlichen Klimakteriums.* (Biological bases of the problem of the male climacteric.) *Wien. klin. Wschr.*, 1937, 50, 1443-1449.—The normal man does not go through a climacteric. However, in cases of men who in their old age show an increased production of the sexual hormone prolan, this could be spoken of as being a climacteric. Cases with enlarged prostate glands belong to this group of men.—P. L. Krieger (Leipzig).

4023. Narain, R. *Photoc phenomena in mystic life.* *Indian J. Psychol.*, 1937, 12, 232-237.—The author inquires into the possible explanations of the photic experiences which characterize the lives of mystics of all races. He dismisses mechanical and electrical stimulation; finds chemical substances in the blood which are due to dietetic regulation, deprivation of food and sleep, breathing exercises and similar yogic processes, accounting for some of the visual phenomena of mystics; finds that a heightened blood pressure attendant upon high concentration may also produce ideoretinal lights; but proposes as the most satisfactory explanation that of central stimulation, for since the only sensations of which the mystic can be aware are the organic and kinesthetic, it follows that this delimitation of the sensory life would render the organic and kinesthetic unusually vivid. Since the hypothalamus is the center of all sensations coming from the viscera, and since these are readily contributed to the thalamus, they readily flow to the cortical visual center. This intensification of stimulation at the visual center is a tenable explanation of the ideoretinal experiences of yogi.—L. A. Averill (Worcester Teachers College).

4024. Pantchenko, D. J. [The knee reflex and its value for the diagnosis of pregangrenous states.] *Nevropat. i Psikhiat.*, 1937, No. 6, 59.—A. Yarmolenko (Leningrad).

4025. Pantin, C. F. A. *On the excitation of crustacean muscle: II. Neuromuscular facilitation.* *J. exp. Biol.*, 1936, 13, 111-129.—This article reports and discusses the results of an experimental investigation of the limb muscle response of *Carcinus maenas* to different frequencies and intensities of stimulation. When certain precautions are taken, such as working always with fresh preparations, it was found that while a single stimulus produced microscopic re-

sponse, or none, a succession of shocks caused contraction at a rate increasing with the frequency until this reached 300-400 shocks per second, these values being close to the refractory period. When the stimuli were increased in intensity, responses both of flexor and extensor muscles showed first a threshold for excitation of the motor nerve, and then (at a higher intensity) a threshold for inhibition. Between the thresholds of excitation and inhibition the response showed considerable independence of the intensity of the stimulus. At very high intensities large contractions could be obtained owing to repetitive excitation. The observed effects are considered explicable in terms of neuromuscular facilitation. In this neuromuscular mechanism, as in that of the Coelenterata, "there is a tendency for an effector to behave as a single system in which the response is governed by the number and frequency of impulses received by the muscle." 18 references.—C. K. Trueblood (Harvard).

4026. Pentsik, A. S., & Lisitsa, F. M. Lokalnye staticheskie i korrëktsionnye reflexy v klinicheskoi semiotike i v experimente. (Local static and righting reflexes in clinical semeiotics and experimentation.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 92-98.—A special group of local, segmental and postural reactions which have been studied experimentally and clinically are discussed. Similarities and differences in these reactions in animals and human beings are shown. Relations to lesions in various parts of the central nervous system are explained.—L. J. Stone (Sarah Lawrence).

4027. Piéron, H. Quelques réflexions et observations à propos de l'induction des rythmes chez les animaux. (Some reflections and observations regarding the inducing of rhythms in animals.) *J. Psychol. norm. path.*, 1937, 34, 397-413.—This is a discussion of rhythmic persistences which are characterized by the maintenance, more or less durable, of periodic oscillations of behavior, originally synchronized with an external oscillation, such as alternating day and night or the tides, when the conditions of the environment have been made uniform without any external periodic variations.—R. E. Perl (New York City).

4028. Polimanti, O. Lethargie und Winterschlaf. (Lethargy and hibernation.) *Wien. klin. Wschr.*, 1936, 49, 2, Teil, 925-929.—The phylogenesis of lethargy follows the following order: latent life (protozoa), temporary immobility (insects), summer sleep and winter sleep following drying up (Crustacea), lethargy of cold-blooded animals, lethargy of mammals, fakirism, lethargy, and latent life in man. The organism decreases its general functions toward a minimum in order to reactivate them under more favorable conditions.—P. L. Krieger (Leipzig).

4029. Rife, D. C. Contributions of the 1937 National Twins' Convention to research. *J. Hered.*, 1938, 29, 83-90.—The dermatoglyphic method was compared with others in the hope of finding a single valid criterion for zygosity. Intra-twin variations, for identicals, are slight as compared with intra-sib

variations. There is a closer resemblance in dermatoglyphics between an identical twin and his mate than there is between the right and left finger and palmar prints of the single individual. For fraternal twins the situation is reversed, there being closer similarity between the right and left hands of the one individual than between the members of the twin pair. Diagnosis of zygosity is based on this principle. Data were gathered at the convention to check this method against the usual combined criteria. Without seeing the twins in person, 59 successes were made out of 61. Three pairs of identical twins differed in taste classification. Handedness was found to be worthless for twin diagnosis.—G. C. Schwesinger (American Museum of Natural History).

4030. Ritter, G. Über doppelseitige reflektorische Pupillenstarre nach Schädeltraumen. (Bilateral reflex rigidity of the pupil after a cranial trauma.) Bonn: Brand, 1937. Pp. 27.—R. R. Willoughby (Brown).

4031. Russell, E. S. Sur le caractère rituel du comportement instinctif. (On the ritualistic character of instinctive behavior.) *J. Psychol. norm. path.*, 1937, 34, 341-353.—The author describes instinctive behavior which is compulsive, appears at a certain point of development as an internal impulse, and is carried out in stereotyped fashion. The instinct dogs possess to bury surplus food is given as an example. This behavior is entirely independent of perceptual control and is therefore not adaptable to abnormal circumstances. However, the young dog rapidly associates the action of burying with that of digging up, and thereafter buries food with the vague design of later recovering it. Thus an action which was at first blind can become intentional in the psychological meaning of the word.—R. E. Perl (New York City).

4032. Skard, Å. G. Turfter og turftseenergi. (Drives and drive energy.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 120-133.—A very complete critical discussion of the dynamic concepts of drives, instincts, needs, impulses, etc., covering almost all available psychological viewpoints. Extensive footnote bibliography.—M. L. Reymert (Mooseheart Laboratory for Child Research).

4033. Spence, K. W. Réaction des mères chimpanzés à l'égard des enfants chimpanzés après séparation. (The reaction of mother chimpanzees on seeing their baby chimpanzees after a separation.) *J. Psychol. norm. path.*, 1937, 34, 475-494.—The questions which interested the author are (1) Is the mother capable of recognizing her children after a more or less extended period of separation? (2) Does the mother continue to be interested in her children and demand them back again? (3) Can behavior of this sort be differentially described and can a numerical scale of judgments of behavior be devised? The intensity of the mother chimpanzee's reactions when presented with her own baby after different periods of separation is compared with the intensity of her reactions when presented with an

unrelated chimpanzee baby. 5 out of 7 chimpanzees definitely distinguished their own offspring from unrelated babies. Statistical measures of stability of estimation and validity are discussed.—*R. E. Perl* (New York City).

4034. **Steinach, E.**, *Zur Geschichte des männlichen Sexualhormons und seiner Wirkung beim Säugetiere und beim Menschen*. (The history of the male sexual hormone and its effect in mammals and in man.) *Wien. klin. Wschr.*, 1936, 49, I. Teil, 161-172; 196-205.—The author describes the influence of the psyche on the inner secretion and how far its influence may be imitated by psychic stimuli. The reproductive glands of male rats which were normal at the beginning of the experiment showed atrophy after a period of isolation of from 6 to 9 months. After that the rats showed a stage of eunuchoidism. Some days after the same animals were exposed to female rats, the male reproductive glands began to work again, and later showed normal form, size and function. It was important that the animals could not only see the females, but also smell them. If the animals were placed together sexual relations could be performed.—*P. L. Krieger* (Leipzig).

4035. **Stokvis, B.** A new method for the uninterrupted registering of blood pressure as a psychophysiological research-technique for the study of psychic stimuli on the blood pressure. *J. exp. Psychol.*, 1938, 22, 365-376.—Following a summary of the literature on uninterrupted measurement of blood pressure, a method is described for uninterrupted automatic, bloodless registration of the systolic and diastolic blood pressure in man. From the blood-pressure reactions to numerous psychic stimuli examined with this method an hypothesis is built up relating to the psychogenesis of essential hypertension.—*H. W. Karn* (Pittsburgh).

4036. **Strughold, H.** *Das animale Nervensystem in grossen Höhen*. (The vegetative nervous system in high altitudes.) *Dtsch. Militärarz.*, 1937, 2, 71-77.—During an airplane flight to 6000 meters, a reflex curve was made in a low-pressure chamber under oxygen respiration. It was found that the irritability of the reflexes was not changed under the given conditions. The onset of disturbance could be delayed by inspiration of oxygen. The effects of the decreased pressure in high altitudes could be made evident by the production of a partial oxygen pressure in the alveoli of the lungs.—*P. L. Krieger* (Leipzig).

4037. **Tilquin, A.** *Influence de la mue sur le comportement de tissage chez les araignées*. (The influence of molting on the spinning behavior of spiders.) *J. Psychol. norm. path.*, 1937, 34, 554-592.—The author is interested in the momentary physiological states of the organism not only as initiators of action but as reinforcers or inhibitors of existing behavior. The phenomenon he reports in detail is the appearance of several anomalies of spinning behavior in the spider many days before molting. These anomalies are explained by a total or partial

inhibition of the sensory-motor mechanisms of construction of the web under the influence of physiological states related to molting and dependent upon age.—*R. E. Perl* (New York City).

4038. **Tomaszewski, W.** *Wpływ psychiki na serce, oddech i ciśnienie krwi*. (Psychological effects on the heart, respiration and blood pressure.) *Kwart. psychol.*, 1937, 9, 401-446.—Experiments were conducted on 54 S's aged 21-22, with Fleisch's recorder of pulse and respiration. Results indicate that mental effort, joy, fear, and strong odors induce an acceleration of pulse rate and respiration. Attention, pain, and sadness have the opposite effect. Warm and cold stimuli slow down the pulse rate but accelerate respiration. Individual differences were also indicated.—*T. M. Abel* (Trade Extension Classes, New York City).

4039. **Untersberger, —.** *Erläuterungen zum vestibulären Enthemmungsphänomen*. (Explanations of the vestibular disinhibition phenomenon.) *Z. Hals- Nas. -u. Ohrenheilk.*, 1937, 42, Part 2, 255-266.—Vestibular reflexes of co-operation between eyes and head are not as well developed in man as they are in animals. They are more inhibited in man than the other labyrinth reflexes (tendency to fall, past pointing). Under certain conditions (for instance in states of disinhibition) the above mentioned reflexes gain in importance, but the others remain more or less unchanged.—*P. L. Krieger* (Leipzig).

4040. **Wright, A. J.** *Labyrinthine giddiness*. *Brit. med. J.*, 1938, Part 1, 668-670.—*W. J. Brogden* (Johns Hopkins).

4041. **Zaworski, T.** *Uzdolnienia i typ antropologiczny seminarzystów*. (The ability and the anthropological type of normal school students.) *Prace psychol.*, 1938, 1, 1-37.—The author classified pupils of the normal school in Poznań with regard to their anthropological type, ascertaining that the sub-Nordic type predominated. He next investigated them with the aid of intelligence tests, which the sub-Nordics passed better, on the whole. As compared with gymnasium pupils, the normal school students showed themselves less capable and somewhat retarded in their development.—*S. Blachowski* (Poznań).

4042. **Zelyeny, G. P., & Kadykov, B. I.** *K fiziologicheskomu analizu privychnykh avtomatizirovannykh dvizhenii*. (Contribution to the physiological analysis of habitual automatic movements.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 85-91.—Experimental study of "automotor associations" or accessory movements shows them to possess some features of conditioned reflexes (extinction, etc.); some of them are more easily formed than conditioned reflexes. The closer the sequence of single movements in the experiment the more easily formed is the automotor association. Fatigue develops more slowly in such associations than in movements in response to external signals. Mental diseases may markedly affect accessory movements and automatic rhythmic movements (experiments of O.

Benevskaya). Thus the number of accessory movements is increased in schizophrenia and decreased in depressive states; this may be of diagnostic significance. The investigation reported is also of importance in the physiology of work.—*L. J. Stone* (Sarah Lawrence).

[See also abstracts 3805, 3811, 3823, 3836, 3839, 3841, 3842, 3846, 3848, 3904, 3936, 3978, 4047, 4064, 4073, 4074, 4082, 4096, 4104, 4125, 4126, 4143, 4172, 4173, 4174, 4182, 4218, 4232, 4296, 4390, 4401, 4410, 4416, 4417, 4418, 4434, 4435.]

PSYCHOANALYSIS, DREAMS, HYPNOSIS

4043. (Alexander, F.) *Institute for psychoanalysis; five-year report, 1932-1937*. Chicago: Institute for Psychoanalysis, 1937. Pp. 70.—This report includes discussions of the professional training offered by the Institute, the research conducted and planned, the co-operation with other professional groups, a statistical survey of training, consultation and therapeutic activities, and lists of articles published by members of the staff, of lectures and seminars in 1935-36 and 1936-37, and addresses by members of the staff, 1935-1937.—*J. McV. Hunt* (Brown).

4044. Alexander, F. *Remarks about the relation of inferiority feelings to guilt feelings*. *Int. J. Psycho-Anal.*, 1938, 19, 41-49.—Playing a central and permanent role in psychopathologic phenomena are guilt feelings and inferiority feelings, and their respective dynamic effects upon behavior are opposite in character. Guilt feelings may be placed in the general category of fear and described as constituting a force inhibiting the expression of hostile tendencies deriving from a sense of justice. The types of reaction to guilt feelings may be listed as: (1) avoidance of expression of hostile tendencies; (2) self-inflicted punishment; (3) provocative behavior; and (4) guilt projection. Inferiority feelings have, as a rule, a stimulating effect upon the expression of hostile aggressions, and may also constitute a type of self-criticism. The common neurotic reactions to inferiority fears may be listed as: (1) an increased hostile aggressiveness, (2) an attempt to depreciate the competitor, and (3) the fantasizing of one's self as superior. Detailed discussion is given of these points, and the author concludes by raising the question of the degree of socialization of which man is capable and of the extent to which he must necessarily retain his individualistic nucleus.—*M. H. Erickson* (Eloise Hospital).

4045. Bem, A. L. *Dostoevskij. Psychoanalytische etjudy*. (Dostoevski; a psychoanalytic study.) Berlin [W 15, Meinekestr. 19]: Petropolis Verl., 1938. Pp. 190. M. 3.—*R. R. Willoughby* (Brown).

4046. Bender, H. *The case of Ilga K.: report of a phenomenon of unusual perception*. *J. Parapsychol.*, 1938, 2, 5-22.—The writer summarizes the work of three commissions which studied a mentally retarded child who, although unable to read herself,

was able to repeat any text read silently by another individual near her. The most thorough studies suggested that the child responded to patterns of auditory cues. The writer notes instances to which this hypothesis is not applicable, and makes suggestions for further tests of other hypotheses.—*C. E. Stuart* (Duke).

4047. Brown, W. *Hypnosis, suggestibility and progressive relaxation*. *Brit. J. Psychol.*, 1938, 28, 396-411.—The author describes experiments upon the effects of suggesting progressive relaxation to patients under hypnosis.—*M. D. Vernon* (Cambridge, England).

4048. Flugel, J. C. *Stage fright and anal erotism*. *Brit. J. med. Psychol.*, 1938, 17, 189-196.—Two cases are described. The first is that of a young woman who derived much satisfaction from playing the piano alone, but was unable to play publicly. In view of her association between emotion and the toilet, piano playing could be carried out only when alone, because for her the same rules applied to music as to the toilet. The second case is that of an accountant. Stage fright did not arise in his professional duties, but he expressed a fear of doing anything which might make him "conspicuous." He showed also an ambivalent attitude towards women, being at once chivalrous and resentful of the difficulties in pleasing them. The anal basis became evident in dreams late in the analysis. Genital activity had become equated in his unconscious with anal productivity.—*E. R. Hilgard* (Stanford).

4049. Fortanier, A. H., & Speyer, N. *Bewusster Betrug, begangen von einem spiritischen Medium: zugleich Analyse eines hysterischen Charakters*. (Conscious fraud practiced by a spiritual medium; and analysis of a hysterical character.) *Schweiz. Arch. Neurol. Psychiat.*, 1936, 37, 53-67.—The authors analyzed the case of a spiritual medium who belonged to a group who practiced fraud voluntarily. The subject came from a psychopathic family, both parents having had melancholic depressions. She was pyknic in type, had hysterical characteristics, and displayed an unhealthy need for approbation.—(Courtesy *Année psychol.*)

4050. Gerard, M. W. *Case for discussion at the 1938 symposium*. *Amer. J. Orthopsychiat.*, 1938, 8, 1-18.—This is the presentation, in the form of a dialogue, of the successful analysis of a case of a girl 7 years old suffering from nocturnal enuresis, anxiety, and difficulties in relationships with the father and with members of the opposite sex.—*J. McV. Hunt* (Brown).

4051. Greenwood, J. A. *Variance of the ESP call series*. *J. Parapsychol.*, 1938, 2, 60-64.—In an unrestricted ESP test the subject seldom calls the symbols with exactly equal frequency, nor is his distribution entirely random. A method for finding the exact theoretical variance of any call series is developed. When this is applied to an example, the resulting exact variance lies between the customary approximations.—*C. E. Stuart* (Duke).

4052. Greville, T. N. E. Exact probabilities for the matching hypothesis. *J. Parapsychol.*, 1938, 2, 55-59.—The theoretical hit-frequency distribution which arises from matching two shuffled decks against each other represents the most conservative basis for the mathematical evaluation of experimental data obtained with the standard ESP cards. The exact frequencies on that basis are here computed and tabulated.—C. E. Stuart (Duke).

4053. Hoop, J. H. v. d. On the objectivity of the psychoanalyst. *Brit. J. med. Psychol.*, 1938, 17, 201-216.—Psychoanalysis is a sincere attempt to rule out subjective influence in psychotherapy through the long training given the analyst in self-knowledge. Suggestion is sometimes a necessary factor in overcoming the rigidity of the patient's attitude. The analyst may avoid the charge of subjectivity if he treats the patient's ideals with respect, even while criticizing them.—E. R. Hilgard (Stanford).

4054. Humphrey, B. M., & Clark, J. A. A comparison of clairvoyant and chance matching. *J. Parapsychol.*, 1938, 2, 31-37.—A significant positive deviation in ESP tests of 42 college students was noted to arise almost wholly from the scoring of one subject. This subject was given further tests under screened conditions. The work is singled out for individual study, and compared with an empirical chance check.—C. E. Stuart (Duke).

4055. Kris, E. Ego development and the comic. *Int. J. Psycho-Anal.*, 1938, 19, 77-90.—General discussion is given of wit, humor and the comic, with the latter described as characterized by economy of thought and by requiring both an observer and an observed. Three generic types of the comic are cited—naïveté, clumsiness, and stupidity; and these are elucidated in relationship to ego psychology and its development, ego conflicts, and particularly ego development in the meeting of problems and the use of language. The essential characteristics of the comic are summarized, in addition to economic and genetic considerations, as direct relationships to past conflicts of the ego, its utilitarian nature as a defense mechanism, and its exhibitionistic qualities.—M. H. Erickson (Eloise Hospital).

4056. Martin, D. R., & Stribic, F. P. Studies in extra-sensory perception: I. An analysis of 25,000 trials. *J. Parapsychol.*, 1938, 2, 23-30.—A single subject made 25,000 calls of ESP cards presented in runs of 25 under screened DT conditions. An average of 6.89 successes per run was obtained. Two control series, averaging 5.03 and 4.98 respectively, show the test results to be highly reliable. Analysis of the data revealed (1) marked (but never below chance) daily fluctuations in scoring, with suggested correlation with physical fitness; (2) greater frequency of successive hits in test than in control series; (3) suggested correlation between scoring success and card position in the run series; (4) marked symbol preferences without significant effect upon scoring.—C. E. Stuart (Duke).

4057. Mayer, L. Die Technik der Hypnose. (The technique of hypnosis.) Berlin: J. F. Leh-

manns Verl., 1937. Pp. 203. M. 6.50.—R. R. Willoughby (Brown).

4058. Narain, R. Freudian categories in the light of structural psychology: condensation. *Indian J. Psychol.*, 1937, 12, 172-175.—The author finds that while there are apparent dissimilarities between Freudian and Wundtian concepts, there is also a considerable degree of agreement between them, so far at least as psychical condensation is concerned.—L. A. Averill (Worcester Teachers College).

4059. Rhine, J. B. Neuland der Seele. (New frontiers of the mind.) (Trans. by Hans Driesch.) Stuttgart, Berlin: Deutsche Verl. Anst., 1938. Pp. 236. RM. 6.00.—R. R. Willoughby (Brown).

4060. Rhine, J. B. Experiments bearing on the precognition hypothesis: I. Pre-shuffling card calling. *J. Parapsychol.*, 1938, 2, 38-54.—Certain ESP test procedures were used to test whether a card order could be called in advance of shuffling. After preliminary tests (summarized) the "precognition" tests were administered to 49 subjects. Significantly positive extra-chance scoring was observed. Some hypotheses alternative to precognition are considered, and conclusions are suspended until crucial tests of the alternatives are reported.—C. E. Stuart (Duke).

4061. Schneersohn, F. Traum und Spiel. (The dream and recreation.) *Schweiz. Arch. Neurol. Psychiat.*, 1936, 37, 128-138; 303-312.—The dream is the psychological manifestation of sleep. Sleep is a state of repose, corresponding to the state of repose in the waking state. In waking repose there is a modification of activity by substitution of recreation for work, of a free for an imposed activity. In the dream, also, there is a change in activity which represents an advance. The dream is as necessary for restful sleep as is recreation for waking repose.—(Courtesy *Année psychol.*)

4062. Speyer, N., & Stokvis, B. The psychoanalytical factor in hypnosis. *Brit. J. med. Psychol.*, 1938, 17, 217-222.—A physician whose attitude toward hypnosis was critical, although he was acquainted with the literature of the subject, was hypnotized first by a woman, later by a man. Immediately after the experience, while still on the examining table, he told all about his sensations. The evidence indicated (1) an erotic attitude toward the hypnotizer, and (2) a regression of the erotic instinct life, at least to the stage of the Oedipus situation.—E. R. Hilgard (Stanford).

4063. Wilson, G. W. Some facts and fallacies regarding psychoanalysis. *Ill. med. J.*, 1938, 73, 248.—Wilson defends the psychoanalytic approach by calling attention to the preparation which the analyst must undergo before he is accepted by the International Psychoanalytic Association. He discusses some common questions as to the nature of this particular method of therapy. He stresses some aspects of transference in analysis, particularly in the neuroses, psychoneuroses, and cases which exhibit somatic complaints which are psychogenic.

He concludes that a competent analyst offers the best hope of successful therapy in the field of the psychoneuroses.—*W. Marshall* (Appleton Clinic, Wis.).

[See also abstracts 4251, 4430, 4437.]

FUNCTIONAL DISORDERS

4064. Abashev-Konstantinovskiy, A. L. [Motor disorders in schizophrenia.] *Sovetsk. Psikhonevrol.*, 1937, No. 3, 100-107.—The dynamic and static co-ordination was defective in 27 out of 46 cases of schizophrenia; the facial mimicry was not expressive or differentiated, especially in the frontal muscles. Many superfluous movements were observed during the experimental investigation.—*A. Yarmolenko* (Leningrad).

4065. Abramson, J. Les aptitudes intellectuelles spéciales chez les instables. (Special intellectual aptitude in unstable individuals.) *Ann. méd.-psychol.*, 1937, 95, Part 2, 603-631.—*R. R. Willoughby* (Brown).

4066. Afanasiev, D. V. [Pellagra in mental patients.] *Nevropat. i Psikiat.*, 1937, No. 5, 89-98.—Out of 82 mental patients having pellagra no change in the psychic state could be observed in 23. Exaggeration of clinical syndromes was observed in 15 cases. Improvement was observed in 17 cases, and in 27 cases the disease changed the mental symptoms.—*A. Yarmolenko* (Leningrad).

4067. Amossov, M. M. [The localization of the disorders of conception of one's own body.] *Obshch. klin. Nevropat.*, 1936, 2, 110-119.—Three cases in which the patients did not recognize the paralysis of their arms and experienced an alien arm showed in post-mortem examination a disorder of the connections between the thalamus and the parietal area.—*A. Yarmolenko* (Leningrad).

4068. Amreich, J. Geistestörungen nach Operation. (Mental disturbances after operation.) *Wien. klin. Wschr.*, 1937, 50, 674-679.—Intoxication psychoses after operation are not rare. They may be caused by intoxication due to more or less pathogenic bacteria in the intestines. It is possible to treat them by corresponding vaccination and by disinfection of the intestines.—*P. L. Krieger* (Leipzig).

4069. Anderson, C. The progressive development of the concept of occupational therapy. *Hospitals*, 1937, 11, 58-61.—*R. R. Willoughby* (Brown).

4070. [Anon.] A study of mental defect. *Brit. med. J.*, 1938, Part 1, 687-689.—*W. J. Brogden* (Johns Hopkins).

4071. Baker, B. W. Administrative policies, past and present (an address on mental deficiency). *N. H. Hlth News*, 1938, 16, 1-14.—*R. R. Willoughby* (Brown).

4072. Bannwarth, A. Der Erkrankungen des extra-pyramidal-motorischen Systems (Schluss). (Diseases of the extrapyramidal motor system; conclusion.) *Fortschr. Neurol. Psychiat.*, 1938, 10, 95-126.—This is the second of two articles dealing

with various disorders of the extrapyramidal motor system. The diseases discussed are paralysis agitans, symptomatic Parkinson's disease, hepatolenticular degeneration, spastic pseudosclerosis, and epidemic encephalitis. The last section discusses new therapeutic measures used in treating these illnesses. There is a bibliography covering the material of both articles.—*D. S. Oberlin* (Delaware State Hospital).

4073. Belgov, I. M. Rasstroistvo nekotorykh komponentov akta khodby u mozzhechkovykh bolnykh. (Disorders of certain components of gait in cerebellar patients.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 49-54.—In normal individuals diagonally synchronized movements of the upper extremities may be observed during locomotion; such synergies may possibly represent manifestations of the primitive mechanism for quadrupedal gait. Quadrupedal locomotion was observed in 100 normal individuals, showing typically crossed alternating movements of the extremities. Observation of 8 patients exhibiting symptoms of cerebellar pathology shows that synergic movements of the upper extremities may be absent, largely on the side corresponding to the lesion. The quadrupedal gait of such patients may substitute a unilateral for a crossed alternation. Similar disorders where there is a pallidial lesion can be differentiated by our knowledge of other symptoms in the latter.—*L. J. Stone* (Sarah Lawrence).

4074. Benevskaya, O. V. Izmenenie sutochnoi krivoi myshechnoi rabotosposobnosti u depressivnykh. (Changes in the daily curve of muscular work capacity in depressive patients.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 200-208.—Ergographic records made by lifting a 3 kg. weight 30 times per min. with the forefinger to exhaustion were obtained on consecutive evenings, mornings, afternoons, and evenings again from 28 male and 34 female depressive patients and 10 normal S's. The former showed the poorest output in the morning, when normal S's did their best. This was taken to confirm A. L. Epstein's theory that neuromuscular inhibition in depressive patients is due to disturbance in awakening (rather than fatigue). Further experiments with work curves were taken (1) before and after a 1½ min. needle shower at 1.5 atm., 32° C.; (2) before and after approximately an hour of physical culture exercises; (3) before and after a 2-2½ hr. period of occupational therapy. These experiments used groups of 7-12 patients. In almost all cases there was an increase in output following the "awakening" process, amounting to a doubling of output in many cases. Similar techniques with normals resulted in a lowering of output.—*L. J. Stone* (Sarah Lawrence).

4075. Bleyer, A. Role of advanced maternal age in causing mongolism. *Amer. J. Dis. Child.*, 1938, 55, 79-92.—The peak age of mothers producing mongoloid idiots in a series of 2822 cases was 41. The incidence of mongolism increases steadily through the child-bearing period, being lowest at

the beginning and highest at the end. No satisfactory evidence was found to relate any of the following factors to the etiology of mongolism: immaturity of either parent; advanced parental age; primogeniture; ultimogeniture; birth rank; broad difference in the ages of the parents; interval preceding the birth of the child with mongolism; low fertility and reproductive exhaustion of either parent. It is probable that the apparent relation of any of these factors to mongolism can be explained through the admixture of advanced maternal age.—*W. J. Brogden* (Johns Hopkins).

4076. **Bonhoeffer, K.** *Ein Rückblick über 45 Jahre psychiatrischer Entwicklung.* (Survey of 45 years of psychiatric development.) *Dtsch. med. Wschr.*, 1938, **64**, 557-560.—A summary of the author's work, reflecting the history of the classic psychiatry. Its first part, the time of Kraepelin, was the time of description and systematic psychiatry. This period was followed by the world war, which increased psychiatric knowledge tremendously. The war showed that endogenous psychoses, namely, schizophrenia and manic-depressive psychoses, showed no relation to external causing factors; neither the psychic trauma of the war nor the physical trauma increased the number of psychoses. These traumata have increased the number of hysterical and neurotic disorders of all kinds, which confirms the belief in the psychogenesis of hysteria. The third period is the post-war time, which has been mainly devoted to an improvement of the psychiatric system and therapy.—*M. Grotjahn* (Menninger Clinic).

4077. **Borowiecki, S.** *Lęki sytuacyjne Prusa.* (Prus' situation phobias.) *Roczn. Psychiat.*, 1938, **32**, 39-86.—The author determines the genesis and the course of the agoraphobia of the distinguished Polish novelist Prus, and describes his struggles against this phobia.—*S. Blachowski* (Poznań).

4078. **Borowiecki, S., Dowżenko, A., & Dowżenko-Łęcka, H.** *Badania nad niedorozojem umysłowym.* (An investigation of mental retardation.) *Roczn. Psychiat.*, 1938, **31**, 28ff.—The majority of oligophrenic cases are due to heredity. With identical twins (from the same ovum), the lack of capacity and the retardation of development generally affect both. But with fraternal twins (from different ova), most frequently only one is affected.—*S. Blachowski* (Poznań).

4079. **Brown, A. W., Jenkins, R. L., & Cisler, L. E.** *Influence of lethargic encephalitis on intelligence of children as determined by objective tests.* *Amer. J. Dis. Child.*, 1938, **55**, 304-321.—*R. R. Willoughby* (Brown).

4080. **Brüel, O.** *Den praktiserende laege og psykoterapien.* (The practicing physician and psychotherapy.) *Ugeskr. Laeg.*, 1938, **100**, 199-201.—While physicians generally agree that about half of all patients are nervous or show other mental ailments, most of them have no training in modern psychotherapy. The article is a plea to practicing physicians to familiarize themselves with psycho-

therapy and to medical schools to give definite training in this field.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4081. **Burns, E. M.** *Psychologic factors in physical disease.* *Northw. Med.*, Seattle, 1938, **37**, 1-4.—*R. R. Willoughby* (Brown).

4082. **Cahane, M., & Cahane, T.** *Recherches sur les hormones hypophysaires dans certaines psychoses.* (Research on the hypophyseal hormones in certain psychoses.) *Ann. méd.-psychol.*, 1938, **96**, 311-320.—By injecting urine from patients suffering from the affective psychoses into frogs, the presence of hormones from the pituitary was revealed by the blackening of the skin of the frog. Urine tests on guinea pigs also revealed the presence of hormones from the thyroid. It is possible that these are secondary to the hypofunctioning of the sexual glands, especially the ovaries. Bibliography.—*M. B. Mitchell* (New York City).

4083. **Cameron, D. E.** *Early diagnosis of schizophrenia by the general practitioner.* *New Engl. J. Med.*, 1938, **218**, 221-224.—*R. R. Willoughby* (Brown).

4084. **Collins, A. L., Atwell, C. R., & Moore, M.** *Stanford-Binet response patterns in epileptics.* *Amer. J. Orthopsychiat.*, 1938, **8**, 51-63.—Study of the S-B test responses of 229 epileptic patients in the Boston Psychopathic Hospital furnished no evidence that deterioration is largely dependent on duration, and no definite evidence of slowness of mental reaction; it showed that vocabulary results approximate the intelligence level as a whole, that other verbal tests give better results on the abstract concepts of the upper level tests than the concrete ones of the lower, and that tests involving reasoning and imagery show better results in abstract than in concrete questions. Conclusion: "It appears that we are dealing, in the lower part of the scale, not with mental deficiency as induced by epilepsy, but with concomitant epilepsy and feeble-mindedness; that the mentally deficient are less immune to the disease than the mentally superior; and that the effect of epilepsy is greatest on the functions least strong and well-developed in the individual."—*J. McV. Hunt* (Brown).

4085. **Csik, L., & Mather, K.** *The sex incidence of certain hereditary traits in man.* *Ann. Eugen. Camb.*, 1938, **8**, 126-145.—Using a method based on the known behavior of sex-linked characteristics, the writers tested the hypothesis that the excess of males found in oligophrenia, Laurence-Moon-Biedl syndrome, harelip and cleft palate, and allergy is due to sex linkage. In none of these four characteristics is there evidence for ascribing the excess of affected males to partial control of the inheritance by sex-linked characters. Of particular interest are the results concerning oligophrenia, where there is almost equal incidence of the character among brothers and sisters of male oligophrenics. The brothers of female oligophrenics, however, show a considerably higher incidence than the sisters.—*J. W. Dunlap* (Rochester).

4086. Davis, K. Mental hygiene and the class structure. *Psychiatry*, 1938, 1, 55-65.—Mental hygiene constitutes for the sociologist a twofold interest, first as a social movement and second as an applied science drawing upon several pure sciences, of which sociology is one. Mental hygiene has taken over the Protestant ethic inherent in our society, not simply as the basis for conscious precept, but also as the unconscious system of premises upon which its scientific analysis and its conception of mental health itself are based. The main features of the Protestant world philosophy are its democratic, worldly, ascetic, individualistic, rationalistic, and utilitarian orientations. It is shown how the definition of the mental norm is dependent upon these Protestant conceptions.—M. Grotjahn (Meningering Clinic).

4087. Dhunjibhoy, J. E. Treatment of schizophrenia by induced convulsions. *Lancet*, 1938, 234, 370-371.—Of 12 typical cases of schizophrenia treated with cardiozol, 3 were discharged completely recovered, 4 were greatly improved, and 5 remained stationary.—W. J. Brogden (Johns Hopkins).

4088. Engerth, G. Sprachphysiognomische Beobachtungen im Rückbildungsstadium aphasischer Störungen. (Observations of speech during the substitution stage in aphasic disorders.) *Wien. klin. Wschr.*, 1937, 50, 340-342.—Under certain conditions the aphasic patient is not able to pronounce the words which he intends to say, but he can only say a letter which indicates the word for which he is seeking. This letter is the point of crystallization for the intended word. This process may be observed only in persons who have an intact understanding of the meaning of the intended word.—P. L. Krieger (Leipzig).

4089. Faris, R. E. L. Demography of urban psychotics with special reference to schizophrenia. *Amer. sociol. Rev.*, 1938, 3, 203-209.—This paper discusses briefly some general findings of Faris' and Dunham's study of the distribution of mental disorders in Chicago. It is found that schizophrenia (like several other psychoses) "comes mainly from hobo, rooming-house, and slum areas, and especially from those sections of the population in each area which are in the minority for that area." These findings are interpreted in the light of the supposition that many, or most, of the typical symptoms of the schizophrenic may be viewed as a result of extreme seclusiveness due to isolation, and that community disorganization plays a major part in producing isolation.—I. L. Child (Yale).

4090. Feldman, E. S. Fiziognomika kak metod diagnostiki shizofrenii. (Physiognomy as a method for the diagnosis of schizophrenia.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 209.—A variety of characteristics of the facial musculature and vaso-vegetative symptoms of schizophrenics of various types are described and are suggested as possible objective criteria for diagnosis of schizophrenia.—L. J. Stone (Sarah Lawrence).

4091. Finkleman, I., Steinberg, D. L., & Liebert, E. The treatment of schizophrenia with metrazol by the production of convulsions. *J. Amer. med. Ass.*, 1938, 110, 706-709.—The rate of remission is almost inversely proportional to the duration of the psychosis. If the psychosis has lasted more than 3 years, the probability of a remission is slight. The catatonic and the paranoid are the types most amenable to treatment by metrazol. No explanation of the action of metrazol in the alleviation of schizophrenia is offered.—W. J. Brogden (Johns Hopkins).

4092. Fischbein, E. C. The dependence of internal medicine upon neuropsychiatric ideology. *Ohio St. med. J.*, 1938, 34, 145-149.—R. R. Wiloughby (Brown).

4093. Fleck, U. Symptomatische Psychosen (1936). (Symptomatic psychoses, 1936.) *Fortschr. Neurol. Psychiat.*, 1938, 10, 127-138.—The article contains a number of short discussions of reports published in 1936. Mental disorders associated with child-bearing, studies of children who have suffered head injuries, pernicious anemia with psychosis, diabetic psychosis, cardiac psychosis, and cardiac neurosis are some of the disorders studied and reported. Bibliography.—D. S. Oberlin (Delaware State Hospital).

4094. Frankl, G. Triebhandlungen bei Dissozialität nach Enzephalitis epidemica und anderen psychopathischen Störungen des Kindesalters. (Uncontrollable drives in the dissociation following epidemic encephalitis and other psychopathic disturbances in childhood.) *Z. Kinderforsch.*, 1937, 46, 401-448.—Not only after encephalitis lethargica but in other instances in which there has been definite injury to brain tissue, the impulse-driven behavior in which ordinary social and personal inhibitions seem completely abolished frequently appears. A number of illustrative case studies are presented.—F. L. Goodenough (Minnesota).

4095. Gilarovsky, V. A., & Gurevich, M. O. Problemi kliniki i terapii psikhicheskikh sabolevani. (The clinical and therapeutic problems in mental diseases.) *Trans. Kostchenko ment. Hosp. Moscow*, 1936, 2, Pp. 270.—This collected volume contains 12 articles concerning problems of experimental-therapeutic treatment of mental diseases, the pathological anatomy of cerebral tumors and brain cysticercosis, work therapy, etc.—A. Yarmolenko (Leningrad).

4096. Gilse, P. H. v. Zum Einfluss der Konstitution auf die Erkrankungen von Hals, Nase und Ohr. (The influence of the constitution on diseases of the throat, nose and ear.) *Z. Hals- Nas- u. Ohrenheilk.*, 1937, 40, 359-378.—The author describes the Italian research (Ciurlo, Gualco) concerning anomalies of the constitution among stutterers and stammerers (brachycephalic skull, vagotonia, and hyperthyroidism). He also discusses the problem of constitution in mongoloid idiots and persons with Lüscher's syndrome (exostoses of the ear, mostly not hereditary), and hereditary recessive deafness in animals. The findings of Alexander,

Tandler, Quix, Howe, and Guild are mentioned. The last two could not get a difference of electrical potential from the auditory nerve in clinically deaf animals. Yerkes' investigations on dancing mice are mentioned. Isuhara is of the opinion that neurological degeneration of the vestibular ganglia is responsible for these peculiarities of motor behavior. In his experiments dancing mice did not show dizziness, but they did show galvanic nystagmus. Cross breeding between "shaker" mice with dancing mice produced normal mice. Therefore, the "shaker" character must be dependent upon another gene than the dancing character.—P. L. Krieger (Leipzig).

4097. Gorovoi-Shaltan, V. A., & Davidenkova, K. G. [The investigation of work ability in hysterical neuroses.] *Obshch. klin. Nevropat.*, 1936, 167-174.—A. Yarmolenko (Leningrad).

4098. Greene, E. B. What courses are essential for work in psychological diagnosis and treatment? *J. consult. Psychol.*, 1938, 2, 43-45.—The results of inquiries by a committee appointed by the Michigan Psychological Association to determine what instructional courses were considered essential for clinical psychological work are summarized as follows: (1) the desired undergraduate program is a broad one, including more study of sciences and languages than of arts or historical subjects; (2) there was 80% agreement on the inclusion of 15 courses in psychology, 5 in social sciences, 3 in medicine, and 5 in languages and sciences. The following criticisms of the investigation are offered: (1) the number of cases was small, (2) the course titles had different meanings for different people, (3) internships were not mentioned.—P. S. de Q. Cabot (Simmons).

4099. Grünberg, M. D. [On the interrelation of schizophrenia and heterogeneous organic diseases of the central nervous system.] *Sovetsk. Psikhonevrol.*, 1936, No. 6, 49-67.—The author had under observation 19 cases in which schizophrenia was combined with other diseases—epidemic encephalitis, brain syphilis, arteriosclerosis, and head traumas. Having found that in the origin of schizophrenia both the endogenous and exogenous factors play a constant part, the author distinguishes the pathologic or organic form of schizophrenia (in which the hereditary factors do not play any considerable role) and the idiopathic schizophrenia, in which the chief traits are the schizophrenic ones even when a heterogeneous psychosis is manifested. In such cases a heterogeneous organic psychosis "unifies" the schizophrenic symptoms. Such combined cases show the role of exogenous factors in the origin and development of schizophrenia.—A. Yarmolenko (Leningrad).

4100. Gutierrez-Noriega, C. Catatonia experimental y shock cardiazolico. (Experimental catatonia and cardiazol shock.) *Rev. Neuro-Psiquiat.*, 1938, 1, 85-107.—The investigation involved subjecting groups of dogs to the influence of bulbo-capnine (designed to excite spasmodic behavior) and recording the effect of shock induced by cardiazol as

a factor in reducing the duration and intensity of catatonic reactions. While it is stated that the interpretation of results may not be applicable in the case of man, the clear-cut differences apparently resulting from cardiazol shock have implications for treatment.—R. M. Bellows (U. S. Employment Service).

4101. Hackfield, A. W. A study in pseudo-heredity; the cyclic interrelationship of juvenile neuropathic traits and the adult tension character in successive generations. *Northw. Med.*, Seattle, 1938, 37, 9-13.—R. R. Willoughby (Brown).

4102. Hausmann, R. Beitrag zur Kenntnis von in mehreren Generationen vorkommenden, aber exogenen Geistesstörungen. (Contribution to the understanding of mental disturbances occurring in several generations, but exogenous.) Düsseldorf: Nolte, 1937. Pp. 25.—R. R. Willoughby (Brown).

4103. Henry, G. W. Mental hygiene during pregnancy. *Prev. Med.*, 1937, 7, 209-216.—R. R. Willoughby (Brown).

4104. Heymanovich, A. I., Veger, A. M., & Khait, M. B. Tak nazyvayemye "koordinatnyye nevrozy" i tsentralnaya motornaya patologiya. (The so-called "co-ordination neuroses" and central motor pathology.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 176.—"Co-ordination neurosis" such as graphospasm was frequently noted in cases of general involution or arteriosclerosis in aged patients. The connection of the mechanism with various organic changes is considered.—L. J. Stone (Sarah Lawrence).

4105. Hill, J. C. A criticism of mental testing. *Brit. J. med. Psychol.*, 1938, 17, 258-272.—8 backward 7-year-old children, selected by intelligence test from 62 examined, were interviewed individually. Most of them appeared to be suffering from an unsatisfactory early environment. Until a satisfactory environment is obtained for all children, eugenic measures need not be considered.—E. R. Hülgaard (Stanford).

4106. Hincks, C. M. The psychotherapy of rehabilitation of patients in tuberculosis hospitals. *Amer. Rev. Tuberc.*, 1938, 37, 61-64.—R. R. Willoughby (Brown).

4107. Hirsch, R. Hypochondrie und Epilepsie. (Hypochondria and epilepsy.) *Mtschr. Psychiat. Neurol.*, 1938, 97, 367-374.—The examination of 600 epileptic patients in hospitals shows that epilepsy does not seem to allow the formation of hypochondriac neuroses.—P. L. Krieger (Leipzig).

4108. Horder, Lord. The hygiene of a quiet mind. *Lancet*, 1938, 234, 763-767.—W. J. Brogden (Johns Hopkins).

4109. Huhner, M. The diagnosis and treatment of sexual disorders in the male and female, including sterility and impotence. Philadelphia: F. A. Davis, 1937. Pp. 490. \$5.00.—[Not seen].

4110. Kanner, L. The paediatric-psychiatric alliance. *Canad. med. Ass. J.*, 1938, 38, 71-74.—R. R. Willoughby (Brown).

4111. Katz, H. R. Analiza zaburzeń czasu i przestrzeni w przypadku schizofrenii. (An analysis of disturbances as to time and space in a case of schizophrenia.) *Roczn. Psychiat.*, 1937, 29/30, 56-66.—The basis of disturbances in the feeling of time and space is constituted by bodily changes, which are also found in encephalitis. The author analyzes a case in which these disturbances appeared clearly in connection with other pathological symptoms.—S. Blachowski (Poznań).
4112. Kerris, F. Integration und Desintegration der Persönlichkeit bei Janet und McDougall. (Integration and disintegration of the personality according to Janet and McDougall.) Würzburg: Mayr, 1938. Pp. 81.—R. R. Willoughby (Brown).
4113. Keschnor, M., Binder, M. B., & Strauss, I. Mental symptoms associated with brain tumors. *J. Amer. med. Ass.*, 1938, 110, 714-718.—From a series of 530 verified cases of brain tumor the following results were obtained: There are no mental symptoms that are specific for brain tumor. Mental symptoms are almost twice as frequent in patients with supratentorial as in those with infratentorial tumor of the brain. Disturbances of memory occur more frequently in patients with supratentorial tumor. Complex visual auditory hallucinations are more frequent in individuals with tumor of the temporal lobe. Crude auditory hallucinations occur commonly on the side of the tumor, whether the tumor is located above or below the tentorium. Localized tactile hallucinations indicate tumor of the opposite parietal lobe. Symptoms are more severe in patients when the tumor involves both sides of the brain. The pathogenic factors in production of mental symptoms, in order of their importance, are (1) involvement of both cerebral hemispheres, (2) increased rate of development of tumor symptoms in general, (3) rapidity of tumor growth, (4) sudden appearance and rapid development of intracranial hypertension, and (5) sub-tentorial location of the tumor. The age, general condition, and premorbid personality of the patient modify the quality of the mental reactions to physical symptoms.—W. J. Brogden (Johns Hopkins).
4114. Koehler, R. Die eugenischen Sterilisationen vom 1.4. 1935 bis 31.3. 1936. (Eugenic sterilizations from April 1, 1935 to March 31, 1936.) Greifswald: Adler, 1938. Pp. 32.—R. R. Willoughby (Brown).
4115. Kogan, J. M. [The disorders of space perception in alcoholism.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 53-62.—In the visual hallucinations of three patients disorders of space perception and of the perception of their own bodies prevailed. The majority of the observed facts favor the central genesis of these phenomena.—A. Yarmolenko (Leningrad).
4116. Korsunsky, S. M. [A contribution to the psychology of "Gedankenlautwerden" and of verbal hallucinations.] *Trans. Kostchenko ment. Hosp. Moscow*, 1936, 2, 63-90.—A. Yarmolenko (Leningrad).
4117. Köst, H. Die Konvulsionstherapie der Schizophrenie [nach L. von Meduna] unter besondere Berücksichtigung der interferometrischen Abbauwerte; zugleich ein Beitrag zur Frage Schizophrenie und endokrines System. (The convulsion therapy of schizophrenia of L. von Meduna, with special reference to interferometric indices of the disappearance; also a contribution to the problem of the relation of schizophrenia to the endocrine system.) Zeulenroda: Oberreuter, 1937. Pp. 44.—R. R. Willoughby (Brown).
4118. Koulik, D. M., & Indict, G. P. [The swallowing of foreign substances in reactive psychoses.] *Neuropat. Psikhiat. Psikhogig.*, 1936, 1893-1900.—Three cases of swallowing foreign substances by mental patients are described. The main factors of this phenomenon are: depressive state of reactive origin, hysterical and infantile mechanisms, imitation, hypoesthesia, and psychic excitation.—A. Yarmolenko (Leningrad).
4119. Kreienberg, W. Die Auswirkungen des Gesetzes zur Verhütung erbkranken Nachwuchses an dem Krankenbestand der Psychiatrischen und Nervenkl. in Erlangen. (The operation of the law for the prevention of hereditarily ill offspring; from the records of patients in the psychiatric and nerve clinic at Erlangen.) Erlangen: Hofer & Limmert, 1937. Pp. 22.—R. R. Willoughby (Brown).
4120. Kretschmer, E. Die Rolle der Vererbung und der Konstitution in der Ätiologie der seelischen Störungen. (The role of heredity and constitution in the etiology of mental aberrations.) *Ned. Tijdschr. Psychol.*, 1938, 5, 388-400.—It has now become possible to take into account the influence of exogenous factors on the clinical picture of the hereditary psychoses, though the correlation with leptosomic, pyknic, and athletic types is still considered significant. "Genuine" and "symptomatic" cases cannot be clearly distinguished in manic-depressive patients, who are particularly sensitive to fluctuations in endocrine secretions. Epileptic conditions may be brought about by brain trauma or alcohol as well as by psychophysical exhaustion and endocrine secretions. Though schizophrenia is more definitely due to hereditary causes, at least 25% of the cases contain exogenous factors. Fear has little influence on a schizoid constitution, which is more receptive to erotic and religious ecstasy. Even psychoses which are usually considered exogenous depend to no small extent on hereditary constitution, which is not merely symptomatic, but actually determines the course of the aberration. Thus a group of delirious alcoholics was 55% pyknic (64% cyclothyme) and only 1.8% asthenic (3% schizothyme), while hallucinatory alcoholics were about 75% schizothyme. Personality structures also play a significant part in psychogenous diseases, in which constitutional factors account for conflicts which in turn bring about pathological conditions.—H. Beaumont (Kentucky).
4121. Krout, M. H. A note on Dunham's contribution to the ecology of functional psychoses. *Amer.*

sociol. Rev., 1938, 3, 209-212.—The author criticizes some of the interpretations offered by Dunham for the findings in his study of the distribution of the functional psychoses in Chicago (see XI: 5105). Krout presents interpretations which attempt to integrate the ecological findings with the psychoanalytic theory of the genesis of the psychoses.—*I. L. Child* (Yale).

4122. Laird, I. M. Some psychological problems in "institutionalizing" defectives. *Ment. Welfare*, 1938, 19, 1-7.—*R. R. Willoughby* (Brown).

4123. Lasswell, H. D. What psychiatrists and political scientists can learn from one another. *Psychiatry*, 1938, 1, 33-39.—The contribution of the psychiatrist to the political scientist is chiefly his point of observation. He focuses attention upon the individual career for protracted periods of time, and he utilizes various ways of exposing the structure of the personality, helping in this way to understand the meaning of the political symbol. The political scientist, on the other hand, is able to give to the psychiatrist a sharper sense of the position of his own subject in relation to the stratification of the community as a whole and with reference to the most important symbols and practices of the community.—*M. Grotjahn* (Menninger Clinic).

4124. Latham, A. D., & Munro, T. A. Familial myoclonus epilepsy associated with deaf-mutism in a family showing other psychobiological abnormalities. *Ann. Eugen., Camb.*, 1938, 8, 166-175.—A family is described in which myoclonus epilepsy associated with congenital deaf-mutism occurs in five out of eight siblings. The parents were healthy and were second cousins. Two children showing harelip and other gross structural defects, with mental defect in one case, occur among the offspring of another cousin marriage. The mother of these children had a psychosis, as did six of her relatives. The psychoses were mainly of the affective type. Cases of epilepsy, mental defect, suicide, and minor personality abnormalities also occurred in the family. A chart of six generations is presented for the family.—*J. W. Dunlap* (Rochester).

4125. Lebedinski, M. S. Motorika i deistvie. (Motility and action.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 177-181.—Disorders of control of motility (motor activity) are manifested in various ways in pathological processes, and experimental study shows such regulation to be intimately connected with emotional characteristics of personality. Characteristic of certain pathologies is lowered resistance to the automatization of motor acts. In mental diseases lack of differentiation of "semantic systems" is demonstrated along with decreased ability to form new patterns of movement. Intellectual difficulties, emotional upsets and mental disorganization are clearly reflected in voluntary motor acts, and the pathology of the "motor sphere" can be studied if we consider the entire evolutionary and pathological personality.—*L. J. Stone* (Sarah Lawrence).

4126. Leshchenko, G. D. Obshchie zakohomernosti i nekotorye chastnye formy motornikh narushenii. (General laws and some specific forms of motor disorders.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 24-32.—The author analyzed involuntary motor phenomena in 3 cases of spinal automatism and concludes that hyperkinesis is connected with a degree of degradation ("primitivization") of the functioning cord mechanism. Four stages are distinguished in the restitution of spinal integration corresponding to the degree of differentiation of spinal activity, each stage with special motor characteristics. Suggestive case material is offered for the author's view that in supraspinal, spinal and peripheral processes the uninjured neuromuscular apparatus in suffering a degradation toward primitive ways of functioning is able to react only with a variety of "motor disorder." Changes are not confined to a single system or link of a system, but functioning in pathological states is rather that of a new nervous unity in a changed environment.—*L. J. Stone* (Sarah Lawrence).

4127. Leshchenko, G. D., & Litvak, L. B. [Contribution to the problem of automatism. A synkinesia of a "pointing" type.] *Sovetsk. Psikhonevrol.*, 1936, No. 6, 26-32.—In two cases of cerebral lesion with paralyzed extremities a singular form of synkinesia was observed: a flexion of one hand provoked in the other hand an isolated extension of the index finger. The analysis of this involuntary movement shows it to be a synkinesia of a new and special type which may be added to the secondary automatisms (Vogt). Both the pyramidal and the extrapyramidal systems, including the brain cortex, take part in the phenomenon described above.—*A. Yarmolenko* (Leningrad).

4128. Levy, J. Relationship therapy. *Amer. J. Orthopsychiat.*, 1938, 8, 64-69.—The relationship therapist assumes that the way to reduce dissensions between and enrich social relationships of human beings is to clarify the roles each plays in any special and close contact. He builds up the therapeutic relationship by establishing rather rigid conditions of treatment: hours, fees, and the nature of the physician-patient relationship. The course of therapy is: (1) a positive stage which brings to the physician the weapon of the patient's affection, which enables him to maintain the therapeutic relationship in spite of (2) the second phase, one of antagonism, during which the patient lives out his various negative feelings toward the therapist, who functions as substitute for the people close to the patient. His task is to utilize the patient's productions to enable him to understand and interpret to the patient his various relationships.—*J. McV. Hunt* (Brown).

4129. Lissakovsky, L. V., & Zakonova, N. I. [A case of psychosis caused by a shot wound.] *Neuropat. i Psikiat.*, 1937, No. 5, 107-111.—A peculiar case of a brain shot wound, with a consequent psychosis, is described. The localization of the lesion did not quite correspond with the psychophysical

changes in the patient. There was observed a definite connection of sense delusions (visual, acoustic and general) with the central mechanisms, as well as a correlation of psychic components of the lobular syndrome with a small lesion in the right lobular area.—A. Yarmolenko (Leningrad).

4130. Madisson, H. Baltic eugenics: the Estonian sterilization law. *J. Hered.*, 1938, 29, 99-100.

This article includes, in English translation, part of a report appearing in *Iuventute Baltica*, a new publication. On April 1, 1937, Estonia's sterilization law became effective. It is both permissive and mandatory and covers only hereditary defects: psychosis, feeble-mindedness, epilepsy, and physical defects. Sterilization is denied on social grounds, thus excluding delinquents, drunkards, and the wives of defective individuals. Administration is by a district commission of five persons, three of whom must be physicians. Appeal from their decision is possible. The request for sterilization or abortion can be made by the afflicted individual, by two physicians, by public guardians, and by institution directors, but not by close relatives or heirs.—G. C. Schwesinger (American Museum of Natural History).

4131. Marshall, W., & Tarwater, J. S. Comparative study of etiologic factors in allergic and psychopathologic conditions. *Virginia med. Mon.*, 1938, March.—The types of onset, the factor of periodicity, and the important effect of the state of health seemed to be the same in both the allergies and mental diseases; multiplicity of sensitivity is inherent in both conditions, and intercurrent disease may cause improvement in both. The authors feel that "past traumatic experiences, of psychic nature, act as psychoallergens and sensitize the autonomic nervous and vasomotor systems by apparently the same means as do the allergens in the production of allergic states." Bibliography.—E. D. Hunt (Brown).

4132. Menninger, K. A. Emotional factors in hypertension. *Bull. Menninger Clin.*, 1938, 2, 74-88.—This paper presents a general discussion of the implications of medical psychology for hypertension. The viewpoint taken is organismic in that the author holds that every medical problem has organic and psychological aspects. That there are psychological factors in hypertension is indicated by transient hypertension through emotional stimulation, the presence of gross emotional pathology in some cases, and the success of psychotherapy in some cases. These points are illustrated from the literature and from the author's own practice. Certain suggestions toward the utilization of the psychological factors in general practice are made.—J. F. Brown (Kansas).

4133. Menninger, W. C. Psychological factors in medicine. *Diplomate*, 1938, 10, 31-35.—R. R. Willoughby (Brown).

4134. Menninger, W. C. Psychological factors in disease. *Wis. med. J.*, 1938, 37, 29-38.—R. R. Willoughby (Brown).

4135. Minot, A. S., Dodd, K., & Riven, S. S. The response of the myasthenic state to guanidine hydrochloride. *Science*, 1938, 87, 348-350.—Recently conducted experiments on two patients who were given doses of guanidine hydrochloride of 6 to 10 milligrams showed that muscle function was restored to an extent equal to that brought about by the administration of prostigmine. The improvement lasted for about 8 hours following either intravenous or oral administration, and repeated doses, up to three, could maintain increased function. No undesirable after-effects were observed.—F. A. Mole, Jr. (Brown).

4136. Mirelson, A., Talal, A., & Shirokov, A. [The temporary decrease of the intellectual functions in neurotics.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 20-27.—The unity of volitional-affective and intellectual disorders defines the structure of dementia. The neuroses can produce some disorders of total psychic functioning which resemble demential symptoms, but are not processual and can end with restoration. No disintegration of personality is observed.—A. Yarmolenko (Leningrad).

4137. Mirskaya, M., & Rosenberg, A. [The changes of personality in progressive paralytics after remission.] *Neuropat. i Psikhiat.*, 1937, No. 6, 77-88.—After investigating 154 cases of full remission of progressive paralytics the author differentiates the following three types of changes of personality: (1) psychogenic formations (neurotic and catathymic); (2) leveling of personality, often with psychogenic components and psychic weakness; (3) character changes, which were infrequent. The leveling of personality must be considered as a separate syndrome.—A. Yarmolenko (Leningrad).

4138. Moore, T. V. The synthetic sense and intelligence. *Psychol. Rev.*, 1938, 45, 219-227.—The data on the perceptual process derived from pathology tend to show that perception consists merely in reception of sensations, not in the configuration of these but in deriving meaning therefrom. This requires for explanation the assumption of a synthetic sense, which is considered the most important factor in general intelligence. Contrary to Gestalt psychology, this synthetic process is dependent on past experiences. It involves both sensory analysis and sensory synthesis. It is particularly the synthetic sense that degenerates in the organic dementias and in agnosia.—A. G. Bills (Cincinnati).

4139. Myasishchev, V. N., & Yakovleva, E. V. [The psychogenic visceral disorders.] *Sovetsk. Psikhonevrol.*, 1937, No. 3, 17-26.—The authors describe 7 cases of visceral disorders with different structures and different pathogenic factors. The roles of predisposition or local insufficiency, of the character or psychic peculiarities, and of the situation vary among the cases.—A. Yarmolenko (Leningrad).

4140. Neele, E. Über induziertes Irresein. (Induced insanity.) Düsseldorf: Nolte, 1937. Pp. 45.—R. R. Willoughby (Brown).

4141. Novlianskaya, K. A. [To the problem of physiogenic and psychogenic factors in hysteria.] *Nevropat. Psikhiat. Psikhogig.*, 1936, 1869-1878.—A. Yarmolenko (Leningrad).
4142. Nyssen, R., & Busschaert, R. Les troubles de la sensibilité à la douleur dans la paralysie générale. (Disturbances of the sensation of pain in general paralysis.) *Ann. méd.-psychol.*, 1938, 96, 289-297.—The sensitivity to pain of 103 general paretics was studied. Muscular reactions as well as verbal responses were studied, because some of the patients were unable to co-operate sufficiently to make verbal responses reliable. In only one case was the analgesia complete on every examination; two others showed complete analgesia on at least one examination. In all the others it was limited to certain parts of the body and frequently varied on re-examination. The apparent hypersensitivity of a few of the patients was attributed to their general emotional incontinence. No correlation was found between the disturbances of the reflexes and sensitivity to pain. No disturbances of the tactual and thermal senses were found. On the whole, the more the mental deterioration the greater was the loss of pain sensation, but this correlation was far from perfect. Bibliography.—M. B. Mitchell (New York City).
4143. Oldberg, E. The reflexes in the prognosis of transverse lesions of the spinal cord. *J. Amer. med. Ass.*, 1938, 110, 104-106.—W. J. Brogden (Johns Hopkins).
4144. Omorokov, S. I. [Physiological peculiarities of the brain cortex in epileptics.] *Nevropat. i Psikhiat.*, 1937, No. 4, 3-18.—The author changed the physiological function of the cortex by stimulating it with faradic current and observing the phenomena thus provoked. The continual localization of excitation in the cortex in epilepsy (Kojevnikov's form) sets free a series of motor automatisms. This provokes the syndrome of constant hyperkinesis, and rebuilds by cortical induction the physiological state of the whole cortical motor area. The result of this is high variability of the motor centers of the cortex.—A. Yarmolenko (Leningrad).
4145. Osipov, V. P. [Concerning the diagnosis of weak forms of schizophrenia.] *Nevrol. i Psikhiat.*, 1937, No. 2, 108-113.—In the diagnosis of schizophrenia in its weak forms (*forme fruste*) and in difficult cases, the following phenomena must be considered: lowering of the emotional level, incongruity in the evaluation of stimuli, decrease or disappearance of interest in work, apathy, prevalence of hypochondriac ideas and fear, non-productivity, stereotypy, and associative distraction.—A. Yarmolenko (Leningrad).
4146. Pałak, J. Reeducacja i higiena psychiczna w stanach pourazowych czaszki. (Re-education and psychic hygiene in cases of injured skull.) *Roczn. Psychiat.*, 1938, 31, 157-185.—The author discusses ways of re-educating those who are suffering as a consequence of injured skull from apraxia, agnosia, alexia, agraphia, aphasia, hemi- and paraparesis. The scientific basis of this re-education is furnished by the psychophysiological principles of James and Thorndike as well as by Taylor's organization of work.—S. Blachowski (Poznań).
4147. Patry, F. L. Educative methods relative to intelligence and character difficulties encountered in children. *J. Sch. Hlth.*, 1937, 7, 246-251.—R. R. Willoughby (Brown).
4148. Perelman, A. A. [Epileptic psychoses and their clinical evaluation.] *Nevropat. i Psikhiat.*, 1937, No. 6, 3-19.—The peculiarities of the cerebral pathological mechanism (the basis of epilepsy) provoke the conditions for affective strain, viscosity, and explosiveness, which form the psychic background in epileptics. The unusual ways of thinking and behaving are peculiarities due to the progressive disease. All the polymorphous phenomena characteristic of epilepsy must be considered from the standpoint of the unity of social and biological factors.—A. Yarmolenko (Leningrad).
4149. Perelmutter, E. A. [On the analysis of some hallucinatory formations.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 80-91.—The author studied two patients with monosymptomatic hallucinations but relatively intact mentality. Psychogenic factors with catathymic mechanisms play the main pathoplastic role in the formation of the hallucinatory content. The hallucinatory images are taken from the experience of the patient (reproductive hallucinations) and are stereotyped, varying within definite limits.—A. Yarmolenko (Leningrad).
4150. Petré, A. Om förhållandet mellan alkoholistvård och sinnessjukvård. (On the relationship between care of alcoholics and care of mental patients.) *Soc.-med. Tidskr.*, 1938, 15, 25-31; 60-67.—Some alcoholics need care at a mental hospital before being placed in the special institution for the care of alcoholics. The writer discusses and illustrates with examples from his own practice the difficulties arising under such conditions.—M. L. Reymert (Mooseheart Laboratory for Child Research).
4151. Petrova, A. P. [The main psychological traits of epileptics.] *Epilepsia*, 1937, 3, 353-399.—The attention in epileptics is stable, but omissions in the work process show short interruptions of consciousness. Adaptation goes slowly, especially when the situation is new. Belated associations (the quick ones) are stereotyped. All the functions have great variability.—A. Yarmolenko (Leningrad).
4152. Podolsky, E. Music becomes a medicine. *Ill. med. J.*, 1938, 73, 255.—Music has emerged as one of the most pleasant of all curative agents. Psychological observations are confirming by measurement what many suspected for a great many years—that music exerts a profound influence on almost every organ in the human body.—W. Marshall (Appleton Clinic, Wis.).
4153. Popov, E. A. O patofiziologicheskikh mekhanismakh katatonicheskikh motornykh ras-

stroistv. (Concerning the pathophysiological mechanisms of catatonic motor disorders.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 190-199.—On the basis of his review of the literature and his clinical observations the author agrees with Pavlov's view that catatonic symptoms must be regarded as the result of cortical inhibition spreading to certain subcortical structures. Other subcortical structures are in a state of increased activity. Brain cells respond to a pathological process by a defensive inhibitory reaction. This is held to explain similar symptoms in hypnosis, deep sleep and other conditions marked by a state of cortical inhibition, as well as the effect of various drugs and of "psychogenic factors." Pathogenetically, catatonic symptoms are divided into three groups: (1) those depending on cortical and partial subcortical inhibition (mutism, delayed reactions, etc.); (2) those dependent on hyperfunction of subcortical mechanisms (catalepsy, catatonic postures, etc.); (3) deficiency symptoms determined by destruction of cortical tissue. A discussion of several disorders all named "negativism" indicates the inaccuracy of usual psychiatric terminology.—*L. J. Stone* (Sarah Lawrence).

4154. **Posvyansky, P. B.** [The main problems of work therapy of psychoses.] *Trans. Kostchenko ment. Hosp. Moscow*, 1936, 2, 107-120.—Work therapy as applied in the USSR differs fundamentally from the same therapy in capitalistic countries; the cause of this difference is the attitude toward work. The author defines the conception of work therapy and the limits of its therapeutic effect in mental diseases. Various groups and cases of mental diseases are analyzed in terms of the various phases—initial, acute and chronic. The author divides schizophrenic patients into 6 groups, according to the results of the work therapy. A series of practical instructions and the role of organization of work in a mental hospital are given.—*A. Yarmolenko* (Leningrad).

4155. **Rakhman, D. J.** [On the dynamics of some forms of delusion.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 73-80.—In two cases of delusions there were observed three stages of delusion-formation: (1) The patients exaggerate the value of real events, but the critical capacities are conserved; a traumatic factor destroys attempts to criticize. (2) Receptivity and attitude toward delusions lead to delusional ideas. (3) A decrease or disappearance of delusion can sometimes be observed.—*A. Yarmolenko* (Leningrad).

4156. **Ravn, J.** **Traumatisk neurose kombineret med postoperativ neurose.** (Traumatic neurosis combined with postoperative neurosis.) *Ugeskr. Laeg.*, 1938, 100, 311-312.—Description of two cases of traumatic neurosis combined with postoperative neurosis.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4157. **Reider, N.** **Blood pressure studies on psychiatric patients.** *Bull. Menninger Clin.*, 1938, 2, 65-73.—51 psychiatric patients were studied in

regard to diurnal blood pressure variations and their reaction to the Hines-Brown cold pressor tests. Judged as a group, the responses of the psychiatric patients were similar to those established by Hines and Brown for non-psychiatric cases. In individual cases paradoxical responses seemed to have particular significance from the psychiatric point of view. The working hypothesis is presented "that if the response to the cold pressor test is normal in a person who has hypertension or abnormal diurnal blood pressure range, psychological factors may be assumed to be paramount, and bear direct causal relationship to the hypertension."—*J. F. Brown* (Kansas).

4158. **Réquet, A., & Turin, J.** **Les délires secondaires au traitement de la paralysie générale.** (Secondary delusions in the treatment of general paralysis.) *Ann. méd.-psychol.*, 1938, 96, 298-310.—Delusion with marked auditory hallucinations was frequently found after fever therapy in general paresis who had been treated with arsenicals. The arsenicals, and sometimes large doses of quinine also, have caused lesions in the inner ear. These have produced buzzing, deafness, and a loss of objectivity resulting in hallucinations.—*M. B. Mitchell* (New York City).

4159. **Robinson, S. C.** **Exophthalmic goiter and gastro-duodenal ulcer—two constitutionally different diseases.** *Ill. med. J.*, 1938, 73, 210.—The author states that these two diseases are psychogenic, yet different in their characteristics. The goiter patient is fearful, excitable, anxious, juvenile, dependent, and frigid, while the ulcer patient is worried, stubborn and inhibited. He is independent, conscientious, mature, and heterosexual. These two diseases seldom occur together in the same individual. Robinson concludes that exophthalmic goiter is dependent mainly on the overstimulation of the autonomic nervous system, while the ulcer case is caused by overstimulation of the parasympathetic nervous system.—*W. Marshall* (Appleton Clinic, Wis.).

4160. **Roediger, U.** **Die Reaktion Schizophrener bei Entzug der Invalidenrente (mit 4 eigenen Fällen).** (The reaction of schizophrenics to the withdrawal of illness compensation; with four original cases.) Würzburg: Triltsch, 1937. Pp. 19.—*R. R. Willoughby* (Brown).

4161. **Rusetski, I. I.** **Klinicheski sindrom piramidnogo vypadeniya.** (A clinical syndrome of pyramidal defect.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 5-14.—Pyramidal lesions were studied by a variety of techniques and their literature examined; they are held to show, in general, a variety of compensatory nervous mechanisms which are systematized into the syndrome. Voluntary movements are marked by loss of differentiation, increased contraction of antagonistic muscles, spastic movements, and synkinetic responses of a massive "extrapyramidal" nature. There is an exaggeration of proprioceptive reflexes, especially of antagonistic ones, resulting in an increase of repetitive responses.

As a result of decreased cerebral control reflexes become more stable. Reflexogenous zones are broadened, and pseudo-crossed reflexes, etc., are found. Normal exteroceptive reflexes are abolished, plantar excitation provoking automatic, "spinal" movements or more complex "extrapyramidal," "subcortical" types of movement. The coefficient of spinal excitability of the *extensor hallucis* enables the topical differentiation of the lesion. Hypertonia is shown in various muscle groups, by "extrapyramidal" posture and increased activity of antagonistic muscles. Differences in the clinical syndrome are shown in different constitutional and motor types.—*L. J. Stone* (Sarah Lawrence).

4162. Sakel, M. The pharmacological shock treatment of schizophrenia. (Trans. by J. Wortis.) *Nerv. ment. Dis. Monogr. Ser.*, 1938, No. 62. Pp. xx + 136. \$2.75.—In the 8 chapters of this revised translation the development and purpose of the insulin-shock treatment are described, instructions for the practical management of patients are given as well as some tentative explanations of the reactions and complications encountered, cases are described, and in the last 2 chapters observations of transitory hemiplegias involving the dominant hemisphere, of aphasias with echo phenomena, and of the course of the removal and return of cerebral activity are recorded.—*J. McV. Hunt* (Brown).

4163. Sakel, M., & Pötl, O. Neue Behandlungsmethode der Schizophrenie. (New treatment methods in schizophrenia.) (2nd ed.) Wien, Leipzig: Perles, 1938. Pp. 126. M. 5.40.—*R. R. Willoughby* (Brown).

4164. Schjelderup, H. Følelsesfortrengning og virkelighets-oplevelse. (Repression of feeling and experience of reality.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 109-119.—Utilizing the analytical method of Wilhelm Reich, the so-called "character analysis," and the associated vegetative-therapeutic treatment of muscle strain and respiration, the writer offers from his own practice two case histories which seem to substantiate Reich's claims.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4165. Schmieder, J. Psychosen nach Starextraktionen. (Psychoses after cataract extraction.) Würzburg: Triltsch, 1937. Pp. 20.—*R. R. Willoughby* (Brown).

4166. Schou, H. Lette og begyndende sindssygdomme og deres behandling i hjemmet. (Lighter and beginning mental diseases and their care in the home.) *Ugeskr. Laeg.*, 1938, 100, 215-220.—There is very little in psychiatric textbooks about the lighter psychoses, since they are generally not to be found in institutions. Practicing physicians know next to nothing about them. 3000 cases committed by physicians over a period of nine years to Dianalund Nervesanatorium for "nervousness" turned out by later diagnosis to fall into the following classifications: mental disease 53%, medical and surgical ailments 18%, functional neuroses 15%, organic nervous ailments 12%. What the practicing

physician labels "nervousness" is thus in most cases mental disease, the three largest groups of which are depressio mentis, psychopathy, and manic-depressive psychosis. The article concludes with a general discussion of therapy in lighter psychoses.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4167. Sherman, M. Contributions to education of scientific knowledge in mental hygiene. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 435-443.—The school's contribution to the mental hygiene of the child is the development of a normal personality. Current psychological thinking rejects the theory of instincts and stresses the dynamic role of psychogenic environmental forces. Conflicts arise from the pressure of cultural and social factors upon the fundamental desires for recognition and security. The school's emphasis upon success and the lack of preparing the child for possible failures are apt to encourage the formation of neurotic symptoms. The process of intellectualization may take the forms of reasoning, dissociation and emotionalism. Careful guidance is necessary in relying upon rewards and punishments as motivating factors.—*P. S. de Q. Cabot* (Simmons).

4168. Sherman, M., & Tjaden, E. A. On monogolism. *Ill. med. J.*, 1938, 73, 158-162.—*R. R. Willoughby* (Brown).

4169. Shevaley, E. A. [Analysis of the conception of dementia.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 5-20.—The concept of dementia, being a general one with the principal criteria in the intellectual sphere, is connected with the notions of intellect and personality. Dementia is a progressive process; it is the weakest form of uniting and systematizing the contents of psychic life. The structure of dementia in each case depends on the loci of least resistance in the psychic apparatus.—*A. Yarmolenko* (Leningrad).

4170. Shevaley, E. A. [Thinking aloud in mental diseases.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 28-41.—Thinking aloud can be observed casually in normal persons, especially during affective moments, as a sporadic expression of the inner thinking process. But it assumes an abnormal character when it is a constant symptom, as a display of autism (in schizophrenics), reduction to an infantile state (dementia senilis), or phenomenon of "secondary speech" (Shevaley).—*A. Yarmolenko* (Leningrad).

4171. Shevaley, E. A., & Perelmutter, E. A. [Concerning the interrelations between hallucinations and delusions.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 42-52.—Delusions and hallucinations, when observed in a patient simultaneously, are not isolated, but exist as a combined pathopsychical structure which is to be considered in the process of its dynamic evolution. Sometimes the hallucinations are only a pathoplastic basis for delusions, or the delusion defines the errors of perception. The different delusional-hallucinatory structures must be

analyzed in each case as data for therapy and prognosis.—*A. Yarmolenko (Leningrad).*

4172. Shindelman, R. Y. **Fenomen promakha.** (The phenomenon of past pointing.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 131-139.—The present study was a preliminary attempt to gather data on the pathognomonic value of the phenomenon of errors in pointing and the effects on it produced by various specific lesions. 19 normals and 20 patients with well localized lesions were subjects. The author's conclusions from his data are that past pointing may be present in other lesions than cerebellar ones; thus the topodiagnostic and pathognomonic significance of the symptom is considerably reduced. Slight deviations in the pointing test in normal S's are not identical with those in pathological cases; the main difference is that in the latter the direction of deviation remains constant. A table presents the clinical picture for each pathological case studied and a statement of the result of the pointing test and observation of the spontaneous deviation of the arms (Goldstein).—*L. J. Stone (Sarah Lawrence).*

4173. Shirokov, A. A. [The galvanic skin reflex in neuroses.] *Sovetsk. Psikhonevrol.*, 1937, No. 4, 62-72.—The strong galvanic skin reflex in hysterical patients shows their high irritability, and the high variability of galvanic reaction is a sign of a labile nervous system. During hysterical attacks a marked increase of the galvanic skin reflex was noted, but after the attack no reaction could be evoked, which signifies a generalized inhibition of the nervous system. A decreased galvanic skin reflex and an increase of the latent period in fatigued neurasthenics show a decrease of irritability in these patients.—*A. Yarmolenko (Leningrad).*

4174. Shmelkin, D. G. **K voprosu o mekhanizme mozghechkovykh rasstroistv lokomotsii u sobak.** (Contribution to the question of the mechanism of cerebellar disorders of locomotion in dogs.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 41-48.—In 8 decerebellate dogs experimental epilepsy was produced by local freezing of the brain cortex (Speranski's method), and the consequent "stationary running" was observed. In 5 animals this running was smooth and coordinated, while in the other 3 extirpation was followed by pronounced disturbance of tonus and static responses and the running was irregular, with dissociated movements of the extremities. Since smooth, coordinated "stationary running" is to be observed in decerebellate dogs even before there is any sign of compensation for cerebellar loss, the author concludes that disorders of locomotion in decerebellate dogs are due to other factors, particularly to those involved in maintenance of equilibrium.—*L. J. Stone (Sarah Lawrence).*

4175. Silverberg, W. V. **The personal basis and social significance of passive male homosexuality.** *Psychiatry*, 1938, 1, 41-53.—This investigation deals with the male individual who in an overt homosexual act would have the tendency to be the passive partner, and whose own sexual organs are not

necessarily participating factors in the situation. The report of some cases gives insight into the unconscious motivation of these persons and into the social significance of passive male homosexuality.—*M. Grotjahn (Menninger Clinic).*

4176. Sirovatko, S., Mebel, M., Vunder, M., & Krylova, E. [The use of gravidan in psychiatric practice.] *Trans. Kostchenko ment. Hosp., Moscow*, 1936, 2, 107-206.—The author observed in female schizophrenic patients disorders of the menstrual cycle that disappeared in 75% after a gravidan treatment. This treatment also changed the psychic condition of the patients. A stable remission was observed in 32%, considerable improvement in 21%, some improvement in 18%, and no change in 29%. In presenile psychoses the gravidan treatment improved the patients' condition in 76%.—*A. Yarmolenko (Leningrad).*

4177. Skoblo, M. S. [A singular disorder of body schema in hemiplegics.] *Obshch. klin. Neuropat.*, 1936, 2, 330-335.—A case of hemiplegia is described in which the patient stated that he had three arms and three legs. The conception of the unity of the paralyzed extremities was replaced by a conception of two left arms, a "good" and a "bad" one.—*A. Yarmolenko (Leningrad).*

4178. Soltau, O. **Ein klinisch-genealogischer Beitrag zur Frage der hereditärogenen Nervenkrankungen: Krankheitsformen in einer mit Huntingtonscher Chorea belasteten Familie.** (A clinical-genealogical contribution to the problem of hereditary degenerative nerve disease: disease forms in a family tainted with Huntington's chorea.) *Passau: Passavia*, 1938. Pp. 40.—*R. R. Willoughby (Brown).*

4179. Stoeltzner, W. **Über den mongoloiden Schwachsinn.** (Concerning mongoloid feeble-mindedness.) In Various, *Festschrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 163-165.—A general article on mongolism, viewed from a medical standpoint. "The modern psychological methods seem hitherto to have found no application in the study of mongolism."—*M. L. Reymert (Mooseheart Laboratory for Child Research).*

4180. Strecker, H. P. **A comparison of insulin and cardiozol convulsion therapies in the treatment of schizophrenia.** *Lancet*, 1938, 234, 371-373.—The time of treatment and mortality rate are approximately equal for the two types of treatment. Intensity of reaction increases with insulin dosage, whereas cardiozol convulsions are not adjustable, only the number induced being subject to control. The insulin and cardiozol cases taken together (irrespective of their duration) show complete or incomplete remission in 40% and 37% respectively, while a survey of spontaneous remission figures shows that of a total of 2460 patients, 24% were reported at home well or improved.—*W. J. Brogden (Johns Hopkins).*

4181. Sullivan, H. S. **Psychiatry: introduction to the study of interpersonal relations.** *Psychiatry*,

1938, 1, 121-134.—Psychiatry as a science is concerned with the thoughts and actions of persons, real and illusory. Everything personal is data for psychiatry, and relevant exactly to the extent that it is personal. The whole subject of human biology is directly or indirectly psychiatric. All contemplations of human thinking and all study of social or group life are tributary to psychiatry. All that is man-made and used by man, all that the anthropologist calls culture, has personal and therefore psychiatric aspects and implications. The primary concern of psychiatry as a science, however, is relatively narrow. Psychiatry seeks to discover and formulate the laws of human personality. It is only indirectly concerned with the study of abstractions less or more inclusive than the person. Personality is made manifest in interpersonal situations, and not otherwise. It is to the elucidation of interpersonal relations, therefore, that psychiatry applies itself.—*M. Grotahn* (Menninger Clinic).

4182. **Tatarenko, N. P.** *K probleme regulyatsii motoriki u shizofrenikov.* (Contribution to the problem of the control of motor activity in schizophrenic patients.) *Trud. Tsentral. psikhonevrol. Inst.*, 1937, 8, 182-189.—25 schizophrenics, 30 other cases of mental disease, and 25 normal S's were tested by Lebedinski's technique: (1) With forefinger and middle finger resting on a tambour (connected to a recording kymograph) S was told to press on the tambour, release it, press again, etc. ("natural" tempo); (2) S was shown his record and asked to try to keep it more regular; (3) S was required to press the tambour in time to E's signals; (4) S was given the same instructions as in (3) but told to avoid superfluous movements; (5) S was told to establish as slow a rhythm as he possibly could. The author reaches the following conclusions: (1) Each individual has a characteristic pattern of movements and inhibitions. (2) In normal individuals, nevertheless, the voluntary movements are rather well regulated, and originally voluntary, automatized movements are well inhibited. (3) In various organic diseases cortical regulation is impaired and inhibition of automatic movements is incomplete. (4) In schizophrenia incomplete active inhibition is manifested by a background of great automatization and stereotypy of movement. The author believes that the technique employed is of value diagnostically and in the study of the types of organization of voluntary activity in mental and nervous diseases.—*L. J. Stone* (Sarah Lawrence).

4183. **Tidd, C. W.** *A note on the treatment of schizophrenia.* *Bull. Menninger Clin.*, 1938, 2, 89-93.—Suggestions are given which may aid in the psychoanalysis or in the analytically oriented psychotherapy of schizophrenic patients. The relationship between the psychological factors and the organic medical factors in the shock therapies is discussed. The author is more optimistic than most writers as to the success of treating schizophrenia along psychoanalytic lines.—*J. F. Brown* (Kansas).

4184. **Turkevich, O. M., & Gershanovich, Z. S.** [On certain hormonal disorders in schizophrenia.] *Sovetsk. Psikhonevrol.*, 1936, No. 6, 80-90.—The prolactin and folliculin contents were investigated in 21 female schizophrenics, with negative results. The cases of schizophrenia where the hormones should be increased (pregnancy, climacteric, etc.) showed an insufficient amount of hormones. This fact indicates the diminished prolactin content in schizophrenics.—*A. Yarmolenko* (Leningrad).

4185. **Villinger, W.** *Die Notwendigkeit eines Reichsbewahrungsgesetzes von jugendpsychiatrischen Standpunkte aus.* (The need of a national guardianship law from the standpoint of child psychiatry.) *Z. Kinderforsch.*, 1938, 47, 1-20.—Two types of antisocial individuals exist in society: those arising from defective stock and those whose delinquencies are due to poor environment. But these groups are not distinct, for poor endowment creates poor environment. Many of the common social problems are the direct consequence of inherent deficiency in the normal intellectual or personality traits. The state should assume complete authority over all defectives of whatever type and exercise the right of sterilization wherever this seems called for, since it is well known that the rate of procreation among the intellectually inferior exceeds that among individuals of superior stock.—*F. L. Goodenough* (Minnesota).

4186. **Villinger, W.** *Angeborener Schwachsinn (nach Erscheinungsbild und Abgrenzung) und das Erbkrankheitenverhütungsgesetz.* (Inborn mental deficiency—according to the clinical picture and definition—and the law for the prevention of inheritable disease.) *Z. Kinderforsch.*, 1938, 47, 36-48.—Mental deficiency may show itself in the sphere of ethical behavior and character manifestations as well as in the intellectual realm, and a law that enforces sterilization on the delinquent as well as upon the feeble-minded in the ordinary sense is therefore justified.—*F. L. Goodenough* (Minnesota).

4187. **Washburne, A. C.** *Recent advances in psychiatric therapy.* *Wis. med. J.*, 1938, 37, 25-29.—*R. R. Willoughby* (Brown).

4188. **Watzlawik, E.** *Vererbung von Psychopathien unter besonderer Berücksichtigung von rückfälligen Verbrechern.* (The inheritance of psychopathies, with special reference to habitual criminals.) *Borna-Leipzig: Noske*, 1937. Pp. 35.—*R. R. Willoughby* (Brown).

4189. **Weiss, K.** *Forensische Beurteilung des Querulantenwahns.* (The forensic judgment of paranoia.) *Weimar: Uschmann*, 1937. Pp. 46.—*R. R. Willoughby* (Brown).

4190. **Wilson, H.** *Psychogenic headache.* *Lancet*, 1938, 234, 367-370.—*W. J. Brogden* (Johns Hopkins).

4191. **Winston, E.** *Indices of adequacy of state care of mental patients.* *Amer. sociol. Rev.*, 1938, 3, 190-202.—Indices of adequacy of personnel and expenditure were devised, and were computed for

each of the 48 states for 1922 and for 1933.—I. L. Child (Yale).

4192. Zyman, R. M. [Mental changes as a result of brain tumors.] *Trans. Kostchenko ment. Hosp., Moscow*, 1936, 2, 5-24.—A. Yarmolenko (Leningrad).

[See also abstracts 3776, 3779, 3836, 3842, 3854, 3884, 3895, 3937, 3984, 3988, 4005, 4024, 4026, 4030, 4049, 4206, 4208, 4209, 4230, 4262, 4277, 4285, 4289, 4309, 4320, 4375, 4404, 4405, 4406, 4420, 4422.]

PERSONALITY AND CHARACTER

4193. Alexander, F. Section on culture and personality. *Amer. J. Orthopsychiat.*, 1938, 8, 31-50.—A report of a round-table discussion in which D. Levy, Mirsky, J. Dollard, K. Horney, G. Zilboorg, G. Mohr, P. Schilder, and S. Lorand participated.—J. McV. Hunt (Brown).

4194. Aptekar, H. The concept of resistance. *Family*, 1938, 18, 346-349.—R. R. Willoughby (Brown).

4195. Burt, C. The analysis of temperament. *Brit. J. med. Psychol.*, 1938, 17, 158-188.—Of 500 cases of children referred because of alleged criminal or nervous peculiarities, 124 were chosen for study whose average rating on all emotional tendencies was approximately the same. Correlations were determined for 11 traits of emotionality (McDougall's primary emotions). From the individual psychographs 8 boys and 3 girls were chosen as representing the group. The correlations for these 11 subjects were nearly identical with those for the group of 124 they were chosen to represent. Four factors appear sufficient to account for the correlations, and two for 90% of the variance. Apart from the factor of general emotionality, there are two important factors which make for (1) aggressive as contrasted with inhibitive emotions, and (2) pleasurable as contrasted with unpleasurable emotion. Correlations between traits and correlations between persons lead to the same factors and to the same coefficients. The formulae described cover the methods of factor analysis of Spearman, Thurstone, Hotelling, and Kelley. In spite of the differences in these methods, they lead to virtually identical final results. Although the correlations between temperaments and physical traits confirm to some extent the results of Kretschmer, and still more those of the Italian school, the correlations are always too slight to be trusted for the needs of diagnosis.—E. R. Hilgard (Stanford).

4196. Chassell, J. A clinical revision of the experience variables record. *Psychiatry*, 1938, 1, 67-77.—When the author in 1928 published his monograph "The Experience Variables" he was attempting to devise an instrument useful in personal counseling and at the same time experimenting with the statistical approach to life-history data. By 1935 these records were out of print and a clinical revision had been published. The aim of this clinical

revision was no longer to cover all conceivable factors that might be related to the formation of personality, but to get a fair sampling from the main aspects of the patient's experience and to open up ground for further exploration. The main topics of the new records are: mother relationships, father relationships, relationships to brothers and sisters, home life, religion and standards, sexual development, love affairs and crushes, physical development, intellectual development, vocational adjustment, general social adjustment, general emotional adjustment, and happiness.—M. Grotjahn (Menninger Clinic).

4197. Despres, M. A. Favorable and unfavorable attitudes toward pregnancy in primiparae. *J. genet. Psychol.*, 1937, 51, 241-254.—The basis of the study is Levy's suggestion that the mother's attitude toward her child is determined by such factors as early emotional impoverishment, too much early responsibility, and unsatisfactory marital adjustment. By means of questionnaires the woman's attitude toward her expected child was studied with reference to these and the following additional factors: the subject's ordinal position in her family, the number and sex of her siblings, the age at which she obtained her sex information and the source from which it came, her feeling of economic security during marriage and pregnancy, her neurotic tendency, and the physiological manifestations of normal development and pregnancy. A short version of the Thurstone personality schedule, as revised by Willoughby, was used. The results of a statistical analysis of data from 100 subjects are given in tables comparing the scores on the various items of the 25% of the group most favorably disposed toward pregnancy with the scores of the 25% least favorably disposed.—E. Heidbreder (Wellesley).

4198. Dysinger, D. W. The fluctuations of mood. *Psychol. Rec.*, 1938, 2, 115-123.—Conclusions drawn from a study of the recorded judgments of 24 subjects concerning mood and physical conditions 3 times a day during a 5-weeks period are: (1) the coefficients of correlation between judgments of mood and those of physical condition were generally low and positive. Apparently (except in cases of actual illness) "the physical condition is a contributing factor rather than a direct cause of mood"; (2) the most frequently reported causes of cheerful moods were past and present social participation and the sense of accomplishment in daily tasks, while the most frequently reported causes of depressed moods were illness and the anticipation of work to be done; (3) marked individual differences were noted concerning an average level of mood and fluctuations around it. No evidence of periodicity of fluctuations was given.—P. S. de Q. Cabot (Simmons).

4199. Fletcher, J. M. The wisdom of the mind. *Sigma Xi Quart.*, 1938, 26, 6-16.—Defense reactions, repression, dissociation, compensation, regression, and escape are discussed as mechanisms by which the mind maintains its equilibrium and defends itself against pain and injury.—J. McV. Hunt (Brown).

4200. Hadley, E. E. Unrecognized antagonisms complicating business enterprise. *Psychiatry*, 1938, 1, 13-31.—Some examples illustrate the relation between unconscious personality factors and business careers. Business may be looked upon as a person. As the activity of people it must show certain personal analogies and traits, which the author has attempted to demonstrate in the analytic interpretation of conceptions of service, reward, and competition. Unconscious motivation may be seen, for instance, in the unrecognized antagonism between governmental heads and big business men.—*M. Grotjahn* (Menninger Clinic).

4201. Hertz, H. Binder's shading responses. *Rorschach Res. Exch.*, 1937-38, 2, 79-89.—This article includes Binder's classification and interpretation of Rorschach "shading responses." Scoring difficulties which may be encountered are illustrated.—*M. Keller* (Brown).

4202. Hertz, M. R. Scoring the Rorschach test with specific reference to "normal detail" category. *Amer. J. Orthopsychiat.*, 1938, 8, 100-121.—Comparison of 3 lists of normal details for use in scoring the Rorschach ink-blot responses (the Hertz list statistically determined, the Klopfer-Rickers list qualitatively determined, and Beck's list empirically based) showed the highest percentage of agreement between Hertz and Beck. Percentages of agreement between any 2 scorers and among all 3 scorers show wide ranges for various cards (high for cards VII, II, VI, IX, and X; low for I and V), and while agreement is regarded as encouraging, the need for further statistical research is considered imperative in order to render the test more reliable and valid.—*J. McV. Hunt* (Brown).

4203. Klopfer, B. The shading responses. *Rorschach Res. Exch.*, 1937-38, 2, 76-79.—The author describes four types of "shading responses" that may occur on the Rorschach test. Tentative interpretations for each type are offered.—*M. Keller* (Brown).

4204. Lipszyc, Z. Metoda badania skłonności. (A method of investigating tendencies.) *Psycho-technika*, 1937, 11, 29-51.—The author, who for many years has been investigating the tendencies of youth by the aid of her own questionnaire, presents the results of her investigations and suggests ways of working over quantitatively the answers to her questionnaire.—*S. Blachowski* (Poznań).

4205. MacDonald, M. W. Criminally aggressive behavior in passive, effeminate boys. *Amer. J. Orthopsychiat.*, 1938, 8, 70-78.—Case studies of 8 boys showing both criminally aggressive and passive-effeminate behavior indicate that they have all grown up under the influence of aggressive, rejecting, punitive women, with opportunities for parental identification overbalanced on the maternal side. They are classifiable as psychopathic personalities; their psychosexual development remained at a pregenital level because heterosexual interest in mothers as women was counteracted by the mothers' hostile discipline. The writer believes that explora-

tion of conflict material may intensify aggressive impulses in such cases, and that therefore they should not be treated in outpatient clinics. Hospital schools are suggested.—*J. McV. Hunt* (Brown).

4206. McDougall, W. The relations between dissociation and repression. *Brit. J. med. Psychol.*, 1938, 17, 141-157.—For Janet and his followers dissociation is a master principle for psychotherapy. Freud and his followers give the leading role to repression. Many eclectic psychologists believe both conceptions to be necessary. The one term "dissociation" is often used to cover two meanings, dissociation and disintegration. True dissociation refers to the failure or imperfection of the associative mechanism or structure. Conflict and repression are affairs of the dynamic, hierarchical relations of dominance and subordination between parts or systems of the total mental structure. The breakdown of the dynamic structure may be described as disintegration. The criticisms of McDougall's account of dissociation offered by Lundholm and Pattie are answered.—*E. R. Hilgard* (Stanford).

4207. Pintner, R., Fusfeld, I. S., & Brunschwig, L. Personality tests of deaf adults. *J. genet. Psychol.*, 1937, 51, 305-327.—A study was made of the personality adjustments of deaf adults by means of the Bernreuter personality inventory. The inventory proved a useful instrument. The deaf are only slightly more emotionally unstable, only a little more introverted, and not quite so dominant as the hearing. They are not separated from the hearing by a sharp difference in personality make-up. Their adjustment seems about as good as that of the hard-of-hearing, as determined by Welles and Pintner. Apparently the later in life deafness occurs the more the chance the person has of making normal personality adjustments.—*E. Heidbreder* (Wellesley).

4208. Piotrowski, Z. Blind analysis of a case of compulsion neurosis. *Rorschach Res. Exch.*, 1937-38, 2, 89-111.—The Rorschach record of this case was analyzed without knowledge of the patient or of his history. The material presented is divided into four parts: (1) conclusions based on the patient's Rorschach record; (2) the complete Rorschach record, including the tabulation and inquiry; (3) a detailed analysis of the Rorschach record, containing a description of the manner in which (1) was derived from (2); and (4) the patient's history and an analysis of his personality based on information received from the patient's physician.—*M. Keller* (Brown).

4209. Rickers-Ovsiankina, M. The Rorschach test as applied to normal and schizophrenic subjects. *Brit. J. med. Psychol.*, 1938, 17, 227-257.—The test was given to 37 schizophrenics and to 20 normal subjects matched with the patients in respect to sex, age, and educational level. The schizophrenics show the following types of excesses over normal subjects: more responses to the whole card, lacking normal details; prevalence of color over movement; more original responses. The inspection of individual cases gives pertinent information with respect to the

particular content of the patient's preoccupation. An appendix gives typical records. 36 references.—*E. R. Hilgard* (Stanford).

4210. *Rosenzweig, S.* The definition of ambivalence. *Brit. J. med. Psychol.*, 1938, 17, 223-226.—The concept of ambivalence was introduced by Bleuler in 1910 to describe the coexistence of two opposite feeling-tendencies in the subject. Lewin's concept of valence leads naturally to a definition of an ambivalent object as one having both a positive and a negative valence. An analogy is provided also in the experimental neuroses described by Pavlov. Ambivalence should refer to the stimulating objects. The subject may be characterized as suffering from ambitendencies based upon earlier repressed experiences with ambivalent objects.—*E. R. Hilgard* (Stanford).

4211. *Ryan, M. S.* An experimental approach to the self-object. *Amer. J. Psychol.*, 1937, 51, 235-252.—The problem of the present study was to collect a large number of self-objects, to classify them as psychological products, to describe their evocation, to relate them to functional modes, and to determine the conditions which govern the organism in apprehending such objects. The materials used were words, questions, quotations, handwriting, photographs, and questions from a typical personality test. The results show that the self-objects produced are: bodily self-object, the non-somatic and non-socialized self, and the socialized self-object; these three classes occur with approximately equal frequency. All the psychological functions (except possibly thinking) may be involved in the production of self-objects; the bodily self comes primarily from the apprehending function, the non-socialized from the apprehending and comprehending, and the socialized self from the comprehending function.—*D. E. Johanssen* (Skidmore).

4212. *Schaffer, K.* Über den Geisteszustand der beiden ungarischen Mathematiker Bolyai Vater und Sohn. (The mental state of the two Hungarian mathematicians Bolyai, father and son.) *Psychiat.-neurolog. Wschr.*, 1936, 38, 489-498.—The anatomic functional component of talent is the product of the individual brain development. Genius is not congenital.—*P. L. Krieger* (Leipzig).

4213. *Sill, J. B.* A case study comparing the performance on the Binet and on the Rorschach. *Rorschach Res. Exch.*, 1937-38, 2, 112-124.—This is a case study of a 14-year-old problem girl. Qualitative observations of her performance on the Binet are compared with the interpretation of her Rorschach responses.—*M. Keller* (Brown).

4214. *Spencer, D.* The frankness of subjects on personality measures. *J. educ. Psychol.*, 1938, 29, 26-35.—In the experimental try-out of a self-report questionnaire designed to measure certain types of personality conflict, 192 high-school students were instructed not to sign their names, and a careful technique was employed to secure frank and honest responses and to convince the subjects that their papers could not be identified. At the close

of the experiment, they were asked to report what the effect on their responses would have been had their signatures been requested. From the findings it is inferred that, had the reports been taken with signatures, not only would a large number of the subjects have resented, evaded, and falsified some of the items, but such deception would have been greatest among those having the greatest conflict. In short, the purpose of the instrument—the measurement of conflict—would not have been attained.—*H. W. Karn* (Pittsburgh).

4215. *Strang, R.* Guidance in personality development. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part I, 197-228.—Three features of personality must be considered in the study of an individual: integration, progression and adjustment. Personality development at any moment is a synthesis of hereditary make-up, early experiences, present situation, and contemporaneous culture. The developmental processes are discussed in relation to preschool and elementary school years and adolescence. A classification of difficulties in maladjustment is as follows: (1) intellectual and perceptual, (2) physical, (3) emotional, (4) social, (5) vocational and economic. Methods of studying personality are reviewed, as well as those of guidance in the development of an adequate personality, such as (1) changing the attitude of others to the individual, (2) changing the environment, (3) encouraging the acquisition of skills, (4) facilitating the increase of insight, (5) suggesting goals. A selected bibliography follows a section dealing with the correction of maladjustments.—*P. S. de Q. Cabot* (Simmons).

4216. *Thorndike, E. L.* Valuations of certain pains, deprivations, and frustrations. *J. gen. Psychol.*, 1937, 51, 227-239.—Attitudes toward prospective "disutilities" in the form of pains, discomforts, deprivations, degradations, frustrations, restrictions, and other undesired conditions were studied by analyzing responses to a set of 51 items headed by the question: For how much money, paid in cash, would you do or suffer the following? Responses were made by a group of C. W. A. workers and by a group of graduate students and teachers of psychology. Evidence is offered that most of the reports are genuine expressions of opinion. To the extent that the reports represent genuine attitudes toward reality, they are regarded as indications of real motives. They are regarded as at least representing attitudes toward imagined offers. The median estimates and the lowest estimates made by various groups for certain items and combinations of items are presented in tabular form. Estimates are as a rule very high. Intercorrelations of the valuations of six sorts of items (e.g. those pertaining to appearance or certain kinds of discomforts) are for the most part positive, and though there is no sure constellation of reported aversions, some of them seem more closely linked than can be explained by a general tendency to feel strong aversions, or to use too high a scale, or both. A table of partial correlations reports the intercorrelations which would be found among persons identical in their total amount

of expressed aversion. Various general characteristics of the responses receive comment and interpretation.—*E. Heiddreder* (Wellesley).

4217. Uhl, W. L., & Powers, F. F. **Personal and social adjustment.** New York: Macmillan, 1938. Pp. xi + 475. \$1.40.—The book deals with the subject in non-technical language suitable for high school students. The authors feel that "personal and social adjustment is the chief issue of human living," and their aim is to give an intelligent understanding of factors involved. There are five main divisions: successful living, dealing with the relation of one's environment and his personal equipment, and how to adjust these; social life in the modern world, pointing out why and how people do things; types of personal adjustment—how to learn from studying people, books and from other sources the best ways to adjust to demands and situations; types of social adjustment—in homes and institutions and to social standards; and finally, the development of social responsibility, covering a discussion of personality, physical and mental hygiene, and character. Suggested pupil activity, in the form of problems for thought or to be written, are presented at the end of each chapter, with references for additional reading.—*D. Bailey* (Mt. Holyoke).

[See also abstracts 3836, 3859, 4112, 4234, 4248, 4266, 4286, 4338, 4380, 4388, 4405.]

GENERAL SOCIAL PROCESSES

(incl. Esthetics)

4218. Balázs, J. v. **Menstruation und Selbstmord.** (Menstruation and suicide.) *Psychiat.-neurolog. Wschr.*, 1936, 38, 407-409.—On the basis of 3110 cases the author shows that suicide and attempts at suicide in women are committed mostly during the menstrual period and especially on the first day of menstruation. The clinical importance of the different stages (premenstruum, menstruum, postmenstruum) decreases in its natural course. During the premenstruum the number of suicides is lowest.—*P. L. Krieger* (Leipzig).

4219. Banerji, H. C., Handiekar, V. K., Dasgupta, J. N., & Bandyopadhyay, K. **Common errors in English pronunciation of Bengalee boys; their causes and remedies.** *Indian J. Psychol.*, 1937, 12, 222-231.—The authors present the results of an inquiry into English language errors of 204 students in classes V-VIII in eastern Bengal. English being required in all schools of India, study of difficult English pronunciations deserves to be investigated. The highest percentage of errors is found in pronunciation of diphthongs, since these sounds are absent in the vernaculars. Much trouble was also found in certain consonants, particularly with *s*. The authors argue for training of all language teachers in phonics and for the use of gramophone records.—*L. A. Averill* (Worcester Teachers College).

4220. Barksdale, E. C. **The art and science of speech.** San Antonio: Naylor Co., 1937. Pp. 386. \$2.10.—*R. R. Willoughby* (Brown).

4221. Bergsveinsson, S. **Nasal + Engelaugt bezw. Liquida im Isländischen.** (Nasal and closed sounds, especially liquids, in Icelandic.) *Arch. ges. Phonet., Abt. 1*, 1938, 2, 30-40.—"Icelandic reveals peculiar combinations between nasal and vibrant consonants. The mouth is not shut for the nasals, for the tongue remains in the position of the preceding vowel, which is thus drawn out nasally. The transition to the following consonants is also subject to nasalization, but takes place very rapidly, so that one cannot give a phonetic notation as in other cases of gliding sounds. An unaccented vowel may lose its lengthening and nasalization."—*P. L. Krieger* (Leipzig).

4222. Berry, M. F. **The developmental history of stuttering children.** *J. Pediat.*, 1938, 12, 209-217.—*R. R. Willoughby* (Brown).

4223. Beyer, H. **Symbolene i "Brand."** (The symbols in "Brand.") In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937, 257-267.—Henrik Ibsen states in a letter that after "Peer Gynt" "Brand" appeared "as of itself." This has been taken to mean that Ibsen thought in antitheses. Brand is symbolically the opposite of Peer. The writer presents a comparative analysis of similar symbolic thoughts in the two works.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4224. Brock-Utne, A. **Eine Studie zur Psychologie der Mythen-Phantasie.** (A study concerning the psychology of myth fantasy.) In Various, *Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 230-256.—The method of investigation of the origin of myth fantasy should ideally be that of comparing two primitive folk groups, one rich in myths and the other devoid of myths. An analysis is made of two such groups which approximate this ideal, the Semangs, rich in myths, and the Weddas, poor in myths. In groups where private ownership of land, social equality, and practical communism go together, no social dissatisfaction arises, and therefore no myths. It is stressed, however, that social dissatisfaction is not the only cause for the origin of myths, though it is by far the most important. When myths are once present, however, they may be nourished from all kinds of sources. Bibliography.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4225. Burkhardt, H. **Tiefenpsychologie und nordische Rasse.** (The psychology of the unconscious and the Nordic race.) *Rasse*, 1938, 5, 41-53.—The author explains the autism of the Nordic race as an indication of their independence of the outer world.—*P. L. Krieger* (Leipzig).

4226. Cabot, R. C. **Honesty.** New York: Macmillan, 1938. Pp. 335. \$2.50.—*R. R. Willoughby* (Brown).

4227. Cameron, N. **Individual and social factors in the development of graphic symbolization.** *J. Psychol.*, 1938, 5, 165-184.—Drawing begins when the child's play-object makes a mark that is discerned. It is first primarily organismic activity, then bait for the attention and participation of

others. In their participation by singling out and giving verbal meaning to adventitiously occurring forms, these others, through repetition, increase the stability of the child's drawings. Organization during this symbolic stage depends both on ability to synthesize and in some cases on failure to see another's point of view (schizophrenics). Too little organization (asyndesis) is manifested in the inclusion of too many elements, in disregard for the conventions of opacity, perspective, etc. Omissions tend to be elements not functionally essential, and to follow the principle of organismic economy as found in action. The decline of drawing at ages 8-10 is related to the growing importance of group participation, the great increase in social communication, and the interchange of attitudes which demand a flexible and more effortless medium—spoken language.—*J. McV. Hunt (Brown)*.

4228. **Cattell, R. B.** Some changes in social life in a community with a falling intelligence quotient. *Brit. J. Psychol.*, 1938, 28, 430-450.—The author predicts that the probable consequences of a downward shift in the intelligence distribution curve will be: a fall in academic standards in schools and an increased cost of education; increased unemployment in the less skilled occupations, and a decrease in the average real earning capacity of the community as a whole; increased delinquency and proneness to aggression between individuals and nations; or, if inhibitory forces prevail, an increase in the social equipment provided for fantasy compensations, or an increase in religious expression; increased crudeness in cultural and recreational tastes and forms of expression, an increased divergence of interests between different groups, and a greater domination by the average; a check to the growth of social and political freedom and a reversion to a more detailed prescription of individual behavior.—*M. D. Vernon (Cambridge, England)*.

4229. **Cavan, R. S., & Ranck, K. H.** The family and the depression; a study of one hundred Chicago families. *Univ. Chicago soc. Sci. Stud.*, 1938, No. 35. Pp. 225. \$2.50.—*R. R. Willoughby (Brown)*.

4230. **Choate, A. B.** Family situations and mental hygiene. *Family*, 1938, 18, 314-315.—*R. R. Willoughby (Brown)*.

4231. **Curry, R.** The physiology of pitch change in the singing voice. *Arch. ges. Phonet., Abt. 2*, 1938, 2, 1-12.—"The author discusses a series of 8 radiographs of the full range of a soprano voice. Special attention is given to the laryngeal mechanism when reproducing high notes. Every radiograph is accompanied by synchronized cathode-ray oscillograms and sound graphs."—*P. L. Krieger (Leipzig)*.

4232. **Czapigo, W.** Pismo typów Kretschmera. (The writing of Kretschmer's types.) *Psychotechnika*, 1937, 11, 120-126.—Although there are no absolute distinctions in the writing of Kretschmer's types, nevertheless certain characteristics appear in one type more often than in others. For instance, small letters are found more frequently in the writing of asthenics than in that of pyknics and athletics.

Since certain characters appear very rarely in the writing of a certain type (e.g., large writing and slanting backwards in asthenics), it is possible on the basis of a graphological analysis to state to what type a person does not belong rather than to what type he does belong.—*S. Blachowski (Poznań)*.

4233. **Dewar, H.** A comparison of tests of artistic appreciation. *Brit. J. educ. Psychol.*, 1938, 8, 29-49.—Application of Burt's picture test for artistic appreciation to a number of adults and children, including some expert art critics, resulted in correlations of rank orders such that all the chief methods of factor analysis point to a single general factor as mainly responsible for the orders, but with some indication of specific factors suggestive of "types" of artistic appreciation. This test and several others given to over 300 children were analyzed for indications of relative reliability and validity. The picture test has the highest reliability and gives results agreeing most closely with teachers' estimates of artistic capacities. Only a small positive correlation is found with general intelligence.—*K. M. Cowdery (Stanford)*.

4234. **Faville, M.** L'insincerità. (Insincerity.) *Riv. pedagog.*, 1936, 29, 2-3.—A characteristic common to all the varied forms of insincerity and deceit in man is an incongruity between expression and certain elements of consciousness. In human nature there is a fundamental incongruity in that man cannot realize himself fully in the development of his animal life; this necessitates the introduction of fiction into his spiritual life.—(Courtesy *Année psychol.*)

4235. **Gage, H. L.** Research in readability: 1. The program for research. *Linotype News*, 1937, 16, No. 2, 2.—This is an introductory article presenting a program for research on the legibility of type faces. Apparatus and techniques of study are described and an example of the research approach is cited. The work is being carried out by Matthew Luckiesh and Frank K. Moss in collaboration with the Mergenthaler Linotype Company.—*M. Keller (Brown)*.

4236. **Gage, H. L.** Research in readability: 2. Effects of leading. *Linotype News*, 1938, 16, No. 5, 2.—This is a progress report of the research of Luckiesh and Moss on type readability. Results of the investigation of the effects of leading show that 3-point leading for 10-point Texttype in 21 picas measure represents the most favorable reading condition.—*M. Keller (Brown)*.

4237. **Glowik, G.** Grundzüge einer psychologischen Betrachtung der Altersstufen im gegenwärtigen deutschen und preussischen Jugendrecht. (Bases for a psychological consideration of the age grades in current German and Prussian statutes on adolescence.) Würzburg: Mayr, 1938. Pp. 60.—*R. R. Willoughby (Brown)*.

4238. **Guttman, A.** Musikpsychologie und Musikpädagogik. (The psychology and pedagogy of music.) In Various, *Festschrift til Anathon Aall*.

Oslo: Aschehoug, 1937. Pp. 207-220.—A review of the writer's works since 1903 in the subjects indicated, with complete bibliography of all his publications.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4239. Hirschfeld, M. *Curious sex customs in the Far East.* (Trans. by O. P. Green.) New York: Grosset, 1935. Pp. 344. \$1.69.—Originally published under the title *Men and Women*.—*R. R. Willoughby* (Brown).

4240. Holm, S. *Psychologie und Soziologie der Masse.* (Psychology and sociology of the crowd.) In: Various, *Festskrift til Anathon Aall.* Oslo: Aschehoug, 1937. Pp. 221-229.—1890 is the date of the first group investigation endeavoring to establish a "collective psychology." Thirty years of work in this direction gave no real scientific data. With the beginning, after the war, of a sociology of the group a new viewpoint was introduced. It is now a problem, however, whether the sociological emphasis is not being overdone, so that this approach also will prove of little value to science. It will be necessary in future research to clearly differentiate the *Vorgang* of the crowd (*Vermassung, Entmassung*) from the concept of the crowd as group or "human manifold." Footnote references.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4241. Hunter, E. R., & Gaines, B. E. *Verbal taboo in a college community.* *Amer. Speech*, 1938, 13, 97-107.—In order to check the idea that the present generation of youth has no inhibitions in relation to word use, a study was made of the attitudes of a group of college students toward a list of socially questionable words. Comparative attitudes of faculty, seniors, and freshmen were studied, and also of the sexes. The tabulated data for the 62 words on which these comparisons were made are presented. The greatest restraint is felt by the freshmen, and seniors feel the most freedom. In regard to a large number of the words the women show greater restraint than the men, but there are some exceptions. Other aspects of the problem are mentioned, but the data have not been analyzed with respect to them.—*C. N. Cofer* (Brown).

4242. Jakobson, W. *Przyczynek do zagadnień badań poczuć moralnych.* (A contribution to the study of problems concerning the moral feelings.) *Psychotechnika*, 1937, 11, 76-87.—After sketching the previous attempts to investigate moral feelings and discussing whether these attempts are concerned merely with moral concepts (or also with moral feelings), the author gives a test of ethical motivation which was applied in the psychological laboratory in Łódź and which is composed of several questions. After the first answer to every question, the answerer is asked "Why?" and this is repeated after each successive answer until the child either says "I do not know" or is silent.—*S. Blachowski* (Poznań).

4243. Jancke-Richter, U. *Die unterschiedliche Fruchtbarkeit in den einzelnen Jenäer Bevölkerungsschichten.* (Differential fertility in single

population levels in Jena.) Borna-Leipzig: Noske, 1937. Pp. 24.—*R. R. Willoughby* (Brown).

4244. Jones, V. *Attitudes of college students and the changes in such attitudes during four years in college.* *J. educ. Psychol.*, 1938, 29, 14-25.—The purpose of this article is to present the results of a follow-up study of the conservatism-liberalism attitudes of college students in certain fields. The attitudes chosen for investigation by means of the Thurstone scales were: attitude toward war, attitude toward the negro, attitude toward religion, and attitude toward the church. The study extended over a six-year period and included follow-ups of two college classes from freshman through senior year. The total number of classes tested, including retestings, was seven. The average change in attitude from freshman to senior year was found to be in the direction of liberalism in every attitude scale except that toward the negro, where there was no change. The changes in attitude were statistically reliable, but were small. The results indicate that four years of college life has some consistent influence on certain attitudes which are not directly taught.—*H. W. Karn* (Pittsburgh).

4245. Klineberg, O. *The intelligence of migrants.* *Amer. sociol. Rev.*, 1938, 3, 218-224.—This paper briefly summarizes the results of several studies of the intelligence of migrants, including negro migrants from south to north, white migrants from rural New Jersey and from rural southern Germany to urban centers. The criteria of intelligence were school records or intelligence-test scores made before migration by children of the adult migrants, or (in one study) by the adult migrants themselves while in school. "The results presented in this paper are not entirely conclusive, partly because of the small number of cases studied, partly because of criticisms which legitimately may be leveled against the criteria used in the measurement of intelligence. They do suggest, however, that a group of migrants may be superior, inferior, or equal to the non-migrants, and that in the meantime nothing can be said about the intelligence of migrants in general."—*I. L. Child* (Yale).

4246. Knox, E. O. *The negro as a subject of university research in 1937.* *J. Negro Educ.*, 1938, 7, 172-179.—The article is a continuation of yearly discussions of the number, nature, university affiliation, and racial identity of the authors, racial character of the student bodies, geographical location of the institutions, and classification in terms of masters' and doctors' dissertations of 168 studies concerning the negro race which appeared in 1937. Of special interest to psychologists are two doctorate dissertations: A comparative study of certain mental disorders among whites and negroes in Georgia during the decade 1923-1932 (University of Georgia); The development of attitudes toward the negro (Columbia University).—*W. E. Walton* (Nebraska).

4247. Kopp, M. E. *Marriage counselling in European countries; its present status and trends.* *J. Hered.*, 1938, 29, 153-160.—The emphasis in

German-speaking marriage counselling centers is shifting from aiding couples who wish voluntarily to avoid parenthood because of insecurity or for economic reasons to reaching couples who are definitely eugenic risks. In Germany, Czechoslovakia, and Switzerland the main objective is to improve the biological stock. A re-appraisal of motherhood and family life, in terms of spiritual values, is linked with the eugenic motive. In the United States marriage counselling centers are serviced by the clergy, educators, psychologists, lawyers, and social workers; in Europe, by physicians, lawyers, and clergymen, especially within state or municipally supported maternity hospitals. France and Belgium deviate from the German pattern in the direction of greater reliance on the family physician. In Holland the birth control clinics are staffed by public health nurses, with three marriage counselling bureaux advising on non-medical problems.—*G. C. Schwesinger* (American Museum of Natural History).

4248. LaPiere, R. T. The sociological significance of measurable attitudes. *Amer. sociol. Rev.*, 1938, 3, 175-182.—Attitude questionnaires measure an overt-symbolic response to a symbolization of an abstract situation. The futility of their past use arises from the mistaken assumption that they provide a measure of preparation to respond to corresponding concrete situations; it has been shown that this assumption holds true only of particular cases. Attitude questionnaires can be of genuine sociological value, however, if they are deliberately applied to the study of ideologies, because ideologies are precisely what they do measure in an accurate and specific way. "Random application will not, however, help in the solution of the problem of the role of ideologies in society. Data on ideologies will be useful only when they are correlated with data on other and relevant social facts. The significance of ideologies in the maintenance and the change of a social system may then be determined."—*I. L. Child* (Yale).

4249. Lasker, B., & Roman, A. Propaganda from China and Japan; a case study in propaganda analysis. New York: Institute of Pacific Relations, 1938. Pp. 134. \$1.50.—The reader is shown how he can detect elements of propaganda concerning the present war, sent out by both China and Japan, designed to affect him emotionally and also to influence American policy and action.—*R. R. Willoughby* (Brown).

4250. Lee, H. N. Perception and aesthetic value. New York: Prentice-Hall, 1938. Pp. 283. \$3.50.—*R. R. Willoughby* (Brown).

4251. Liss, E. The graphic arts. *Amer. J. Orthopsychiat.*, 1938, 8, 95-99.—Artistic activity may be regarded as a cathartic phenomenon. The product, especially in the making, reveals emotional factors at work in the individual. There is an abatement of tension which has been appreciated and utilized in occupational therapy of an artistic nature. The esthetic element is the appeal to the psyche of the group or to the individual through the common

bond of empathy. In the graphic arts the significant diagnostic criteria are size, line or form (fixity of pattern and repression are related), color (brown and black are associated with deep unconscious components of a depressive nature having a repressed aggressive implication), and subject or symbol, which is subject to the procedures of dream analysis and play techniques.—*J. McV. Hunt* (Brown).

4252. Mennicke, C. A. *Sociale psychologie*. (Social psychology.) Utrecht: Bijleveld, 1935. Pp. 211.—Man's activities are controlled by his emotions, which find expression through his consciousness and volition rather than through instinctive acts. This results in an infinite variety of means of satisfaction and in a sublimation of personal volition due to the acceptance of certain moral values. In primitive society man is bound by absolutely valid traditions, while modern man has lost confidence in the supremacy of an established social order. War and crises impose insoluble difficulties on the individual, while tradition has lost its value. This paves the way for a leader who offers harmonious satisfaction by concentrating upon himself the emotions of self-preservation and self-assertion after having won the confidence of the masses by propaganda. Thus man depends for the satisfaction of his desires on the whim of a single person, which endangers the existence of lasting values.—*H. Beaumont* (Kentucky).

4253. Orton, J. L. The cure of stammering, stuttering, and other functional speech disorders. New York: Fortuny's, 1938. Pp. 112. \$1.00.—(Not seen).

4254. Pawłowski, L. Testy K-D jako metoda badania uzdolnień muzycznych młodzieży szkolnej. (The K-D tests as a method of investigating the musical ability of school children.) *Prace psychol.*, 1938, 1, 118-170.—The author studied with the aid of the Kwalwasser-Dykema music test a total of 1249 persons (children and adults). Tests belonging to groups II, III, V, and VII (distinguishing the color of a tone, feeling the intensity of a tone, distinguishing the length and the pitch of a tone) were found to be diagnostic. Groups I and VI of the tests (remembering tones and distinguishing rhythms) should be superseded by one group of tests for memory and comparison of tones. Tests in groups IX and X (representation of sounds and rhythms) should be simplified in certain ways. Finally, the tests of group VIII should be extended to include an investigation of taste as to context as well as of mere form.—*S. Blachowski* (Poznań).

4255. Pepper, S. C. Aesthetic quality; a contextualistic theory of beauty. New York: Scribner, 1937. Pp. 264. \$2.00.—*R. R. Willoughby* (Brown).

4256. Piasecki, E. Dalsze badania nad genezą ćwiczeń cielesnych: Zelman. (Further investigations of the genesis of the Zelman bodily exercises.) *Prace psychol.*, 1938, 1, 171-186.—An analysis of the collective game known as the Zelman. This game,

which has long been popular in Poland, is probably of Scandinavian origin.—*S. Blachowski* (Poznań).

4257. Pratt, C. C. **Structural vs. expressive form in music.** *J. Psychol.*, 1938, 5, 149-156.—The initial charm of music is considered to come from the arrangements of tonal materials rather than from any extrinsic reference suggested by these arrangements or musical forms. Two meanings of musical form exist: (1) structural form, arrangement of tonal parts into a coherent structure, and (2) expressive form, the musical character which derives from the completed structure. Where true musical character leaves off and actual emotion seeps in is a problem which leads to a whole program of research in musicology. The question is posed whether music of fine expressive form which is lacking in structural supports can stand the test of time.—*J. McV. Hunt* (Brown).

4258. Ranulf, S. **Moral indignation and middle class psychology; a sociological study.** New York: G. E. Stechert, 1938. Pp. 199. \$4.00.—*R. R. Willoughby* (Brown).

4259. Reinhardt, J. M. **Social psychology. An introduction to the study of personality and the environment.** Philadelphia: Lippincott, 1938. Pp. ix + 467. \$3.00.—The author is concerned with the development of individual personality within the socio-cultural environment. After an introductory chapter, the biological phase of personality occupies one-third of the book. Such topics as "Biological Inheritance and Human Behavior Traits," "Acquired Organic Factors and Personality," "The Psycho-Social Significance of the Nervous System," and "Evidences from Studies of Twins" are treated. For the next nine chapters some of the broad social phases relative to problems of personality and modes of individual adjustment, such as "Divergent Social Norms and Adjustment Patterns," "Culture and Personality," "Personality Unity and the World of Value," "Race and Personality," "Objective Measurements and Group Differences," "Personality Adjustment and Class Distinctions," "Occupation, Personality, and Adjustment," and "Personality and Insecurity" are discussed. Chapter 16, "The Paradox of Human Nature," concludes the book. At the end of each chapter the author suggests readings.—*K. S. Yum* (Chicago).

4260. Roberts, J. A. F., Norman, R. M., & Griffiths, R. **Studies on a child population. III. Intelligence and family size.** *Ann. Eugen., Camb.*, 1938, 8, 178-215.—This is another in a series of studies of 3400 children of the city of Bath. The correlation between the Otis index of brightness and number of living siblings is $-.224$. The regression of sibling number on IB was linear, while the other regression was nonlinear, but not enough so to be of practical importance. 1271 children were also tested with the Stanford-Binet scale. The total group was broken into four subgroups depending on type of school, and the data were studied for relation between intelligence and family size within these groups.

The relationship dropped, but the general picture remained unchanged.—*J. W. Dunlap* (Rochester).

4261. Ross, R. T. **Studies in the psychology of the theater.** *Psychol. Rec.*, 1938, 2, 127-190.—"An attempt to measure the mood-reactions of audiences to lights of different colors as they might be seen in the theater." Conclusions are: (1) when responding to colors, individuals tend to be specific in naming times, places or action when not asked specifically for moods; (2) essentially agreeing with practice, high degrees of brightness are associated with active comic scenes; low brightnesses are associated with tense, tragic, melodramatic and romantic scenes; (3) high saturation is associated with emotional, tense, comic and melodramatic scenes; (4) no definite relationships are established between low saturation and mood-reaction; (5) warm colors are associated with comedy and activity, cool ones with tragedy. "We are only justified in concluding that groups in the particular culture studied tend to react to colors seen in theatrical situations as to an integration of hue, saturation and brightness, and that they react with a significant degree of consistency and predictability."—*P. S. de Q. Cabot* (Simmons).

4262. Sapir, E. **Why cultural anthropology needs the psychiatrist.** *Psychiatry*, 1938, 1, 7-12. Cultural anthropology has been conceived of as a social science which concerns itself little with the individual; but no one can truly understand the dynamics of culture, of society, of history, without taking account of the actual interrelationships of human beings. In other words, social anthropology is not possible without the psychiatrist, who is called the "systematic student of human personality." However, psychiatry has not yet been able "to do much more than to ask intelligent questions."—*M. Grotjahn* (Menninger Clinic).

4263. Schroeder, T. **A challenge to sex censors.** New York: Author, 1938. Pp. 159.—By supporting the contention that obscenity is wholly subjective, "sex censors" are attacked, and the belief is expressed that discussions of sex may be brought, legally and ethically, into the open. The present publication, promoting the interests of the Free Speech League, is intended as a prospectus for a larger volume.—*D. G. Ryans* (William Woods College).

4264. Steadman, J. M. **A study of verbal taboos.** *Amer. Speech*, 1935, 10, 93-103.—To determine why some words drop out of the language, this study of three closely related types of taboo words was made. Individual lists compiled by 361 predominantly southern college juniors, seniors, and graduate students were the material of the study. The types of words were: coarse or obscene words, words of an unpleasant or sinister suggestion, and innocent words that have become contaminated. Considerations of propriety led the men to hand in short lists of such words, and the lists handed in by the women were even shorter. Lists of words of each type along with student comments on the words are presented. Euphemistic substitutes for objectionable words

rapidly become taboo themselves, and the objectionable word itself may persist in the language longer than the substitute. Chance associative connection may contaminate words for an individual, though they are innocent in the view of others.—C. N. Cofer (Brown).

4265. Tanakadate, —. *L'étude des phonèmes japonais au moyen de films sonores.* (The study of Japanese phonemes by means of sound films.) *Ann. Univ. Paris*, 1936, 11, 26-31.—When one pronounces *k-u-k-e*, records it on a sound film, and then rolls the film backwards, one hears *e-k-u* without the final *k*. The *k* represents what the author calls a latent sound, i.e., one which does not become perceptible except when followed by a vowel. This problem of latent sound is connected with that of the duration necessary for the perception of sounds.—(Courtesy *Année psychol.*).

4266. Thorner, H. A. The mode of suicide as a manifestation of phantasy. *Brit. J. med. Psychol.*, 1938, 17, 197-200.—Two cases are considered. A young man of 28 attempted suicide by poisoning. In his case the mode of suicide was connected with phantasies about food and eating. A girl of 20 attempted suicide by strangulation. Her phantasies were built up around her father's voice, hence aggression was directed against the throat. Suicide is a symptom like any other, and as such it is primarily a defense against an anxiety situation.—E. R. Hilgard (Stanford).

4267. Trendelenburg, W., & Stahl, J. *Zur Kenntnis der Resonanz von Luftröhre und Bronchien.* (The resonance of the trachea and bronchia.) *Arch. ges. Phonet., Abt. 2*, 1938, 2, 40-46.—"Let us assume the partial-tone amplitudes of several vowels of the same tonality sung at increasing pitch (harmonics). Co-ordinating these to amplitude 100 of the vowel-former (strongest part-note) we can plot the partial amplitudes as ordinates of a common abscissa of frequencies. Thus we get an approximating graph which, under certain premises, can be taken for a resonance curve of the windpipe (thorax with bronchia) applicable to the range of frequencies beginning with the lowest voice. The curve culminates in the lowest notes investigated (80 Hz) and descends to about 250 Hz. But whether this culmination is a maximum we cannot say, the voice being incapable of reproducing the lower frequencies. Then it rises again, more or less, until a range is reached where the resonance of the upper pharyngobuccal region interferes, so that we cannot determine the further progress of thoracic resonance."—P. L. Krieger (Leipzig).

4268. Urich, J. The social hierarchy in albino mice. *J. comp. Psychol.*, 1938, 25, 373-413.—Observation of fighting indicated the presence of various social hierarchies in male mice. Two types of hierarchies were common: (1) exclusive dominance by one mouse, with no fighting or resistance from subordinates, and (2) one animal dominant over all others and another dominant over all but the first. Fighting in females was rare. Males began to fight

at an average age of 50 days. A hierarchy sometimes developed slowly and sometimes rapidly. Permanence of the fighting order varied from a few days to at least several months. The position of dominance sometimes shifted from one to another of the group. Sometimes an animal was alternately submissive and dominant. In adults there was little or no correlation between fighting order and weight, age, and copulation order. Age and weight were more important in mixed groups of mature and immature animals. Social order and the tendency to attack an intruder were related. Blinding did not greatly interfere with fighting. Castration inhibited fighting in some mice but not in others. Fighting in the home cage was usually more successful than in a strange situation. Extensive bibliography of literature on social behavior in animals.—N. L. Munn (Peabody).

4269. Vierling, O., & Sennheiser, F. *Zur Klanganalyse der offenen und geschlossenen Vokale.* (The acoustic analysis of open and closed vowels.) *Arch. ges. Phonet., Abt. 2*, 1938, 2, 47-58.—"An appliance fitted with electrical high-pass and low-pass filters for analyzing sound was employed for investigations as to the appearances of different frequencies in open and closed vowels in connection with words. In the open (short) German vowels *i, ɔ, ʊ*, there was a considerable increase in overtones, as compared with the close (long) German vowels *i, o, u*. The difference between the long and short spoken *e* and *a* consists of a displacement of the characteristic frequency to a higher one."—P. L. Krieger (Leipzig).

4270. Wawrowska, W. *Badania psychologiczne nad rozwojem mowy dziecka (od 1.0 = 2.3 lat).* (Psychological investigation of the development of a child's speech from 1.0 to 2.3 years.) *Prace psychol.*, 1938, 1, 38-100.—Observing the development of her son, the author shows how from quarter to quarter there grew or diminished a number of words that were babbling, playful, onomatopoeic, and adequate. The adequate words she analyzed in detail, after dividing them into groups according to parts of speech. In conclusion, the author deals with the development of statements (sentences), which she analyzes with regard to the number of words contained in them.—S. Blachowski (Poznań).

4271. Whitten, I. E. Therapies used for stuttering: a report of the author's own case. *Quart. J. Speech*, 1938, 24, 227-233.—None of the author's ancestors are known to have been stutterers, nor is there any family history of left-handedness. The author is right-handed and knows of no neuro-pathological factors related to her stuttering. The stuttering began when she began to talk, and its course is traced briefly through school and college experiences, and up to the point of inability to continue teaching because of its increasing severity. At that point psychiatric treatment was undertaken. This treatment and ensuing study of abnormal psychology relieved emotional tension "but my stuttering remained about the same." A

second procedure, study under a speech pathologist whose techniques involved direct attack on the stuttering symptoms, is described in detail. Noting the similarity between her case and others, it is concluded that the chief variable seems to be in the preliminary psychiatric treatment, and that the combination of these two therapies made possible the mastery of stuttering.—*W. H. Wilke* (New York University).

4272. *Wilke, W. H.* The development and application of a scale for measuring diction. *Quart. J. Speech*, 1938, 24, 268-281.—A quantitative diction scale was constructed, following the procedure used by Thurstone in the construction of attitude scales. The reliability of the scale values (r , corrected, = .83) indicates that these quantitative indices of the degree of unacceptability of the various items represent a rather stable opinion among the 56 expert judges. Application of the scale to a study of the reliability of diction tests indicates an average correlation of .70 between test scores obtained by two examiners. Differences in the judging tendencies of the four examiners, leading to considerable differences in the severity of ratings and qualitative differences due to selective attention to certain sounds rather than to others, were important factors in reducing the reliability of the tests.—*W. H. Wilke* (New York University).

4273. *Wilson, R. S.* The short contact in social case work. (2 vols.) New York: National Association for Travelers' Aid and Transient Service, 1937. Pp. x + 201; viii + 219. \$1.50; \$1.50.—The first volume presents the theory and application of time-limited relationships in social work. The appendices include brief outlines of the use of the short contact by the medical social worker and the home economist. There is an 8-page bibliography. The second volume consists of a series of 25 short-contact cases.—*E. D. Hunt* (Brown).

4274. *Żawrocki, O.* Badania nad współzawodnictwem na podstawie pomiarów biometrycznych. (An investigation of competition on the basis of biometric measurements.) *Prace psychol.*, 1938, 1, 187-220.—Investigations carried on in several schools showed that spontaneous competition (without the use of praise or prizes) gives a positive result—a better one in the lower classes, a somewhat smaller one in the higher classes.—*S. Błachowski* (Poznań).

[See also abstracts 3775, 3821, 3856, 3859, 3930, 3984, 4023, 4041, 4045, 4086, 4088, 4089, 4096, 4121, 4123, 4152, 4175, 4181, 4189, 4193, 4200, 4217, 4281, 4284, 4290, 4295, 4315, 4342, 4348, 4356, 4388, 4426, 4427, 4428, 4429, 4438, 4442.]

CRIME AND DELINQUENCY

4275. *Brown, A. W., & Hartman, A. A.* A survey of the intelligence of Illinois prisoners. *J. crim. Law Criminol.*, 1938, 28, 707-719.—A survey of the intelligence of 13,454 adult male admissions into three state prisons from 1930 to 1936, as obtained

from Army Alpha (Bregman revision) supplemented in some cases by Stanford-Binet and Arthur Performance and a comparison with the general population as found in the U. S. Army draft, showed: (1) approximately the same level of intelligence as in the general population, (2) a more heterogeneous distribution of intelligence than in the general population, (3) a disproportionate number of mentally retarded and mentally defective men, and (4) approximately the same proportion of superior and very superior individuals as in the general population.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4276. *Chinn, W. L.* A brief survey of nearly one thousand juvenile delinquents. *Brit. J. educ. Psychol.*, 1938, 8, 78-85.—Data are tabulated regarding 966 boys aged 7 to 15 who in 1932 appeared before the Birmingham juvenile court for indictable offenses. Theft in eleven forms was the predominant offense; sex offenses were non-existent for ages 7-11. Broken homes in several forms were found for 31.5%. The delinquents came from families in which the modal number of children was five, the delinquent more frequently than otherwise being the second child. In a control group of non-delinquents twice as many were found to be members of Boy Scouts, Boys' Brigade, or club groups as among the delinquents. Offenses tended to be committed during week-ends, with considerable variation among the different months of the year.—*K. M. Cowdery* (Stanford).

4277. *Cushman, R. A.* The criminal insane. *Calif. West. Med.*, 1938, 48, 83-87.—*R. R. Willoughby* (Brown).

4278. *Hales, W. M.* Clerical tests in state reformatory. *Person. J.*, 1938, 16, 316-324.—Both the Minnesota vocational test for clerical workers and the Thurstone examination in clerical work were given to 40 inmate workers and 89 inmate clerical students in a Minnesota reformatory for men. The inmate workers scored reliably higher than the students but somewhat lower than employed sample groups outside. The correlations between test results and rankings by teachers and supervising officers were low, sometimes even negative. They averaged about .35. The correlations between such rankings and IQ's were slightly lower. The Minnesota test seemed to be a little more valid, as judged by the correlations, than the Thurstone and had the further merit of being easier to administer and score.—*M. B. Mitchell* (New York City).

4279. *Hatfield, M.* Children in court. New York: Paebur Co., 1938. Pp. ix + 184. \$2.00.—Condemning the "old court system" for falling short in its purpose of correcting youthful offenders, a juvenile court judge offers, non-technically and non-statistically, his personal observations of children in court in the form of anecdotes and brief commentaries. Discussions concerning individual offenders, their offenses, their environments, factors contributing to delinquency, and the treatment of offenders are included under the following chapter

headings: the home; the school; the church; the community; the government; miscellaneous; and observations from the bench.—*D. G. Ryans* (William Woods College).

4280. Kopp, M. E. Surgical treatment as sex crime prevention measure. *J. crim. Law Criminol.*, 1938, 28, 692-706.—The historical development of the use of asexualization (castration and sterilization) in sex abnormalities for therapeutic and eugenic purposes is surveyed. When co-ordinated with social treatment, beneficial results may accrue to the patient and to society.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4281. Martin, R. L. Rasse und Verbrechen. (Race and crime.) Bochum-Langendreer: Pöppinghaus, 1937. Pp. 39.—*R. R. Willoughby* (Brown).

4282. Mayr, H. Die Sicherungsverwahrung. (Protective custody.) *Bl. Gefängnisw.*, 1936, 67, 402.—Protective custody is intended to protect society from the criminal, and therefore it must be intrinsically a long imprisonment, because the persons involved are dangerous habitual criminals. The behavior of criminals in this kind of prison is usually good. Privileges, which may be slowly gained by the prisoners, are of highly educative value. At the present time in Germany approximately 6000 persons are imprisoned in this way.—*P. L. Krieger* (Leipzig).

4283. Novelli, G. Zum Problem der Individualisierung der Strafe (Schluss). (On the problem of individualizing punishment. Conclusion.) *Kriminalistik*, 1938, 12, 54-58.—This is the third of three articles (see XII: 3681) dealing with the problem of individualized punishment. The author further discusses the possibilities and methods of individualizing punishment under both fixed and flexible penal codes, and continues his argument for study of the problem of individualization always from the three standpoints of: (1) legislation, (2) judicial fixing of penalties, and (3) actual application of punishment. It is only, he believes, by continuous investigation of the problem from all these three points of view, and in the light of the effects of various kinds of punishment upon the psychology of various classes of offenders, that the proper ends of punishment, namely improvement and social readaption of the amenable offender, can be best served.—*C. K. Trueblood* (Harvard).

4284. Parratt, S. D. A scale to measure effectiveness of police functioning. *J. crim. Law Criminol.*, 1938, 28, 739-756.—A police rating scale was derived by Thurstone's psychological method based upon the subjective opinions of a carefully selected group of citizens as to what constitutes good police practice. The final scale of 126 statements comprises the following fields: (1) characteristics of personnel; (2) selection, discipline, training, and equipment; (3) influence of politics; (4) public and press relations and crime prevention; (5) treatment of groups and minorities; (6) treatment of suspects and witnesses; (7) apprehensions and investigations; and (8) vice.

—*L. Ackerson* (Illinois Institute for Juvenile Research).

4285. Rozenblum, Z. Oligofrenia jako czynnik kryminologiczny w przestępczości nieletnich. (Oligophrenia as a criminal factor in youthful delinquencies.) *Roczn. Psychiat.*, 1938, 31, 37-70.—Among youthful delinquents the author discovered (using the Binet-Terman method) 16.7% oligophrenics, among whom the debilitative predominated. Mental defectiveness is only one (and not the most important) factor in youthful delinquency; other dominant factors are the influence of the environment, hereditary defects, and the low moral level of the family.—*S. Blachowski* (Poznań).

4286. Schol, H. Untersuchungen an Persönlichkeit und Sippe der Asozialen der Stadt Giessen. (Investigations on the personality and genetic stock of asocial persons in the city of Giessen.) *Wetzlar: Scharfe*, 1937. Pp. 27.—*R. R. Willoughby* (Brown).

4287. Sen, J. M. A study of certain characteristics of delinquent boys. *Indian J. Psychol.*, 1937, 12, 163-171.—In accordance with the Bengal Children's Act of 1922, there is maintained at Alipore (Calcutta) a reformatory school for offenders 12 years of age and upward, and an industrial school for offenders under 12. The paper presents a classification of the 211 boys in the institutions, 143 in the reformatory and 68 in the industrial section. Most of the delinquents were Hindus and Moslems; they spoke principally Bengali, Hindi, or Urdu; they came chiefly from Bengal, Bihar, and the United Provinces. The chief offense was theft. Education is conducted in the three principal languages mentioned, with full facilities for moral and religious instruction. The percentage of feeble-minded was found to range from 40 to 50. The median IQ of the reformatory group was 80. Heredity and bad home conditions seem to be factors in delinquency.—*L. A. Averill* (Worcester Teachers College).

4288. Weeks, P. H. The big house of mystery. Philadelphia: Dorrance, 1938. Pp. 259. \$2.00.—The author presents an account of many of his varied experiences during his 18 years' service as prison physician at the Indiana State Prison.—*M. H. Erickson* (Eloise Hospital).

4289. Wilson, D. C. What medical and psychiatric forces can do to reduce crime. *Virginia med. Mon.*, 1938, 65, 73-75.—*R. R. Willoughby* (Brown).

4290. Wilson, L. Public opinion and the individualized treatment of criminals. *J. crim. Law Criminol.*, 1938, 28, 674-683.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4291. Wood, L. Responsibility and punishment. *J. crim. Law Criminol.*, 1938, 28, 630-640.—The retributive theory of penal treatment, which involves moot questions of free will versus psychological determinism in ascertaining criminal "responsibility," is rejected in favor of the utilitarian theory, which aims at reformation, deterrence, and the

protection of society. Punishment is an evil (although a necessary evil) of a diseased social organism, which would cure the symptoms while leaving the disease untouched. Drastic curative social reforms are necessary: alleviation of poverty and unemployment, the control of disease, the eugenic supervision of marriage, the dissemination of birth-control information, the sterilization of the unfit, etc.—*L. Ackerson* (Illinois Institute for Juvenile Research).

4292. Woodbury, R. M. The juvenile delinquent population and rates of recidivism. *Social Serv. Rev.*, 1937, 11, 623-633.—*R. R. Willoughby* (Brown).

4293. Young, H. T. P. Parental alcoholism as a factor in adolescent crime. *Brit. J. Ineb.*, 1938, 35, 93-113.—*R. R. Willoughby* (Brown).

4294. Young, P. V. Defective social intelligence as a factor in crime. *Amer. sociol. Rev.*, 1938, 3, 213-217.—From 2000 consecutive probation application records, a relatively homogeneous group was obtained by using only the 250 cases that displayed 12 given traits in common. The records of these cases were studied. "The objectives of the study were to examine the processes of criminality as a *Gestalt* in this highly selected group and to learn the extent and the nature of the relationships between the personal configurated experiences, the social world and the changes in the role of personality which contributed to their criminal behavior." Tentative results are reported briefly.—*I. L. Child* (Yale).

[See also abstracts 4186, 4205, 4237.]

INDUSTRIAL AND PERSONNEL PROBLEMS

4295. Carter, L. F. Social work ability. *Person. J.*, 1938, 17, 1-3.—The criterion for judging the ability of 38 social workers was obtained by having them rated by their county administrator, his assistant, the intake supervisor, and the old age assistance supervisor. The application, interview, and test correlated .341, .495 and .801 with this criterion. The test as originally given, however, correlated only .178, but when the best 150 out of 470 items were selected, the correlation became quite satisfactory and apparently the most desirable means of selecting the social workers for this group.—*M. B. Mitchell* (New York City).

4296. DeSilva, H. R. The human element in stopping a car. *Brake Serv.*, 1938, 8, 9-12.—The average reaction time required to start braking a car is .45 sec. This time is divided into two parts: .22 sec. for perceiving the signal and starting to lift the foot, and about .23 sec. to move it from the accelerator to the brake. A table is given telling how far a car will travel at various speeds for reaction times from slow to fast. A number of factors which influence reaction time are: attention, age and sex, the position of the brake pedal, the driver's stability in difficult situations, and the size of the driver. Speed of driving is positively correlated with speed of reaction time.—*C. N. Cofer* (Brown).

4297. DeSilva, H. R. Facts about automobile drivers. *Harv. Alumni Bull.*, 1938, 1-4.—This paper presents a summary of some of the work of the traffic bureaus, especially that at Harvard. Facts and figures are furnished by this bureau to state motor vehicle departments to show them the most effective and economical methods for reducing the accident rate. Data are available on the trends and principles of the most effective types of motor vehicle procedure. Results of conferences with accident drivers are cited, and evidence on the accident repeater problem is summarized. Age and sex factors are discussed in their relation to driving. Individual clinical education should be effective for the majority of drivers whose chief weaknesses are their failures to adjust properly to certain personal and mechanical defects.—*C. N. Cofer* (Brown).

4298. DeSilva, H. R. The clinical treatment of traffic violators. *Police J.*, 1937, Dec.—The administration of tests of vision, steering, brake reaction time, vigilance, estimating vehicle movements, and depth perception is followed by the clinical interview, which is designed to cause the violator to cite the cause of his violation and reveal any physical incapacity of which he is unaware. Statistics are given with regard to the application of this plan in the Wichita police department.—*F. G. Allen* (Brown).

4299. DeSilva, H. R., & Robinson, P. The driver clinic in Delaware high schools. *Safety Educ. Mag.*, 1938, March.—This article describes the work of a Harvard driver clinic in various Delaware high schools. The students did well on most of the driver tests. They were inferior to adults in their performance on the vigilance apparatus, which measures ability to do several things at once. They also did poorly on speed estimation.—*M. Keller* (Brown).

4300. Drake, C. A., & Oleen, H. S. The technique of testing. *Factory Mgmt. Maint.*, 1938, 96, 72-78.—After an analysis of a number of jobs in terms of length of the cycle, nature of the elements of the cycle, sizes of materials or parts, serial order of elements of the cycle, three-dimensional positions of parts manipulated, incidence of finger, wrist, arm, and body movements, posture of the operator, visual, tactual, and kinesthetic factors, and speed and rhythm of work, nine tests were devised which gave sufficient reliability and validity to distinguish between good and poor inspectors, dual operators, and operators working on tasks involving hand-foot coordination. Those who made low scores in the tests were difficult to train and were more accident-prone than those who made high scores. Eight steps necessary for the development and construction of tests based on job analyses are suggested, and the cost of introducing tests in an organization of 1000 employees is provided, as well as the savings effected by the use of tests in selecting 500 employees.—*H. Moore* (Mt. Holyoke).

4301. Forbes, W. H., Dill, D. B., DeSilva, H. R., & Van Deventer, F. M. The influence of moderate carbon monoxide poisoning upon the ability to drive automobiles. *J. industr. Hyg.*, 1937, 19, 598-603.—In 11 experiments upon 8 normal men their performances in simple tests of reaction time, binocular vision, coordination of hand and eye, etc., and the pulse, respiration, and blood sugar were unaffected by breathing carbon monoxide until their blood was 30% saturated. At 45% performance was only slightly impaired. Subjectively they felt normal at 30% saturation or less, but at 45% appeared and felt unequal to driving a car.—F. G. Allen (Brown).

4302. Gąsiorowski, J. Bibliografia psychologii wojskowej. (A bibliography of army psychology.) Warsaw: Księgarnia Wojskowa, 1938. Pp. xxvi + 779.—This bibliography contains 6382 items, a subject index, and statistical tabulations. The great majority of the bibliographical items here presented refer to books and articles that appeared from 1915 to 1933 (ca. 78%). German literature has furnished the largest number of items, then French, Russian, English, Polish, Italian, and other literatures, in succession.—S. Blachowski (Poznań).

4303. Giellerup, S. H. A plan for pre-testing industrial advertisements. *Industr. Marketing*, 1938, March, 9-10; 46.—The customary checking service being of no value to the industrial advertiser, the best testing device is the controlled-opinion or the consumer-jury test, in which from 30 to 100 prospects are shown several advertisements and are asked to state which appeals to them most. The subjects should be people "who are typical prospects for whatever it is you are offering," and should each be given not more than six forms. The prospects should be in two groups, and if both groups "give the same result, you can be pretty sure that all the additional answers you would obtain would not change it."—H. Moore (Mt. Holyoke).

4304. Gummersbach, H. Zur Psychologie der Verkehrsunfälle. (On the psychology of traffic accidents.) *Krim. Mh.*, 1937, 11, 268-272.—This article examines the statistics of traffic accidents and the types of accident prevailing in Germany during 1935 and 1936 from the standpoint of the psychological factors involved, where these are important. They are not considered important in mechanical types of accident (*mechanische Ereignisse*). Attention is given to the significance for the accident situation of reflex and impulsive varieties of human response (*Reflex- und Triebhandlungen*). There is some characterological discussion of personality types apt to figure in traffic accidents. Methods of dealing with the various classes of traffic offenders are examined from the psychological point of view; some reference is made to the problem of bicycle riders in motor traffic. Emphasis is laid on the importance of nation-wide uniformity of traffic regulations and traffic penalties. The article concludes with certain generalizations respecting those whose psychology is such that their excursions

into city and metropolitan traffic should be restricted or prohibited.—C. K. Trueblood (Harvard).

4305. Hersey, R. B. Life with the boss. *Person. J.*, 1938, 17, 4-9.—This is a series of short quotations from workers regarding their work and their attitude toward it and toward their bosses.—M. B. Mitchell (New York City).

4306. Hozer, J. Technika, medycyna i psychotechnika w służbie bezpieczeństwa pracy. (Technique, medicine, and psychotechnics in the insurance of safety at work.) *Psychotechnika*, 1937, 11, 69-76.—The author points out the need for co-operation between technicians, physicians, and psychotechnicians in order to prevent accidents and to determine their causes. At the same time he makes suggestions as to the organization of this co-operation.—S. Blachowski (Poznań).

4307. Kornhauser, A. W., & McMurry, R. N. Rating from photographs. *Person. J.*, 1938, 17, 21-24.—Photographs of ten salesmen with known sales records and intelligence test scores were ranked as to selling ability and intelligence by some 800 visitors at the National Business Show in Chicago. The rankings were about what would be expected by chance. The judges' ratings were fairly consistent when taken in groups, but lacked validity, especially for selling ability. The judges showed a "halo" effect in marking the subjects similarly in both traits, while in reality there was a negative correlation.—M. B. Mitchell (New York City).

4308. Lauer, A. R., & Getman, G. N. An abbreviated clinical procedure for motor vehicle drivers. *Yearb. Optom.*, 1937, 109-115.—Visual tests which are adequate to determine an applicant's qualification to operate a motor vehicle and which are not too long are described. The tests listed include measurements of the visual field, color vision susceptibility to glare effects, ocular dominance, visual acuity, phorias and ductions, depth perception, and distance judgment. A suggested form card for motor vision examinations is presented.—C. N. Cofer (Brown).

4309. Malinowski, A. Oligofrenia a służba wojskowa. (Oligophrenia and military service.) *Roczn. Psychiat.*, 1938, 31, 86-98.—The author discusses ways of recognizing oligophrenics among the army recruits, asserting that in every thousand recruits there are about 3 oligophrenics.—S. Blachowski (Poznań).

4310. Personnel Research Federation. Will the slaughter go on? *Person. J.*, 1938, 16, 333-339.—Several studies during the past ten years all indicate that most automobile accidents are caused by a relatively few drivers who are known as accident repeaters, yet practically nothing has been done to cure them. They consist of the following: (1) the young and inexperienced, (2) "those who lack driving ability because they have never been taught properly and are incapable of learning from their own experience," (3) those who suffer from physical or mental infirmities, (4) irresponsible and reckless

people, and (5) willful law-breakers.—*M. B. Mitchell* (New York City).

4311. **Schneider, E.** *Zur Psychologie der Verkehrsunfälle.* (On the psychology of traffic accidents.) *Kriminalistik*, 1938, 12, 77-81.—This article takes issue with a previous one on the same subject (see XII: 4304) by H. Gummersbach. The present author insists that reflex and impulsive acts (*Reflex- und Triebhandlungen*), and analogous forms of behavior, which were discussed at length by the prior author, have relatively little bearing on traffic accidents. He feels rather, as a practical police officer, that responsibility for traffic accidents is more commonly to be fixed on such everyday shortcomings (*Fehlverhalten*) of the traffic offender as frivolity, speeding, and general carelessness. Exception is also taken to the prior author's thesis that the mechanical types of accident are without important psychological factors. A typical case of mechanical accident is that due to defective brakes; but if the regular brakes fail the emergency brake should still be applicable, provided the driver continues in his senses. If the emergency brake were also defective, there would still be a psychological factor involved, namely, gross negligence (*grober Fährlassigkeit*).—*C. K. Trueblood* (Harvard).

4312. **Slocombe, C. S.** *Psychology of co-operation.* *Person. J.*, 1938, 16, 325-332.—One company has the foremen rate workers on forms devised by the union. The men are allowed to see their ratings. This fosters a spirit of co-operation. Although to the foremen and the workers the important thing is the rating of the men, in reality the co-operation, both in devising the method and using it, is much more important.—*M. B. Mitchell* (New York City).

4313. **Targoński, H.** *Czym jest psychotechnika, a czym nie jest.* (What psychotechnics is, and what it is not.) *Psychotechnika*, 1937, 11, 111-119.—Psychotechnics investigates the connection existing between work and the worker. The author discusses the tasks and methods of psychotechnics, as well as the role of mathematics in psychotechnics. At the end he adds some remarks on the education of psychotechnicians.—*S. Blachowski* (Poznań).

4314. **Thorne, F. H.** *Ophthalmology in aviation.* *Arch. Ophthalm.*, Chicago, 1938, 19, 253-277.—The visual tests which must be passed by all classes of army, commercial, and private pilots are enumerated. The less familiar tests are explained, and the significance of each test is discussed.—*M. R. Stoll* (Mass. Eye & Ear Infirmary).

4315. **Whitehead, T. N.** *The industrial worker.* (2 vols.) Cambridge: Harvard Univ. Press, 1938. Pp. xi + 265; vii + 162. \$5.00.—From 1927 to 1933 the Western Electric Company maintained an experimental room at the Hawthorne branch. In it a group of 5 girls assembled telephone relays under the observation of an inspector, a supervisor, and several others. Conditions of work were varied, and careful records were kept of output, conversations, and a large number of other facts. These data and their inter-relations are described in detail in Vol. I

and presented in charts in Vol. II. The results show that the output was very slightly affected by rest pauses, hours of sleep, periodic illness, temperature and humidity, or change in the type of relay being assembled. Further analysis and replotting showed slight daily and weekly but not yearly cycles. Thus many physical factors may be varied over a fairly wide range without greatly modifying the efficiency of light physical work. But the output was markedly affected by social forces within the room. Thus one operator became a leader and stimulated a continuous rise in output over a long period. The working group functioned as a small social system, and an understanding of the forces and events in this system was most important in predicting output.—*H. Schlosberg* (Brown).

4316. **Wilson, M. A.** *Bibliography of highway safety.* *U. S. Dep. Agric. misc. Publ.*, 1938, No. 296. Pp. 136.—*R. R. Willoughby* (Brown).

4317. **Wilson, O. W.** *Wichita traffic clinic.* *Publ. Safety*, 1937, Aug. Pp. 2.—All Wichita drivers who receive two warnings for moving-traffic violations within any twelve-month period are automatically called into the traffic clinic for an interview. The Harvard driver tests are administered as an aid in gaining information regarding the violator. In the interview the clinic officer endeavors to cooperate with the violator in discovering his abilities and limitations. Of the 200 violators examined since the opening of the clinic, only eight have experienced subsequent difficulty in traffic.—*M. Keller* (Brown).

4318. **Witmer, L. R., & Sheddan, B. R.** *Civil service standards.* *Person. J.*, 1938, 17, 16-20.—Minimum requirements for civil service jobs should be determined scientifically. An example of social service visitors shows that weights can be determined for training and experience as well as for test items. In Pennsylvania the college graduates tested higher than the non-college graduates working as visitors. Those with social service training received the highest performance ranks.—*M. B. Mitchell* (New York City).

4319. **Witwicki, W.** *Psychologia a wojsko.* (Psychology and the army.) Warsaw: Księgarnia Wojskowa, 1938. Pp. 34.—A demonstration of the need of psychology in the army, as well as a review of the most important psychological problems that have a significance for the army.—*S. Blachowski* (Poznań).

[See also abstracts 3864, 3891, 4278, 4284, 4324, 4342, 4352, 4359, 4382, 4383, 4384, 4394, 4395.]

EDUCATIONAL PSYCHOLOGY

(incl. Vocational Guidance)

4320. **Abrams, H.** *Individual enrichment for the adolescent mentally retarded through classroom techniques.* *Proc. Amer. Ass. ment. Def.*, 1937, 42, No. 2, 150-156.—*M. W. Kuensel* (Children's Home, Cincinnati).

4321. Adams, F. J. Predicting high-school and college records from elementary-school test data. *J. educ. Psychol.*, 1938, 29, 56-65.—In this study the author determined the extent to which the products of a nearly minimum testing program during the later elementary-school grades predict the characteristics of the subsequent scholastic records of students. The following generalizations are drawn: (1) The average high-school graduate and average college freshman tend to come from the chronologically younger half of each elementary-school grade group, from the older half in MA, and from the higher half in IQ. (2) IQ's obtained during the later elementary-school period predict best the college aptitude test achievement; then follow high-school graduation age, college entrance age, and relative high-school achievement. (3) The relative quality of achievement during the freshman year of college appears to be predicted best from the relative high-school achievements of the students, and then from the college freshman aptitude-test standing; IQ's obtained during the later elementary grades have a low positive relation thereto. (4) The combined relative standing of students in the high 6th grade with respect to IQ and Stanford Achievement educational age may be a superior basis for the prediction of relative achievement in high school.—H. W. Karn (Pittsburgh).
4322. [Anon.] Degree thesis research summaries. *Brit. J. educ. Psychol.*, 1938, 8, 86-90.—Digests are given of methods used and results found in studies of manner of memorizing prose passages; relative prognostic values for secondary education of entrance examinations, teachers' estimates, and Scottish mental survey test; a special method of teaching primary school spelling; self-teaching vs. expository methods in religious instruction; the relationship between rate and quality in handwriting; form perception in relation to school subjects; and forgetting of different kinds of material by school children.—K. M. Cowdery (Stanford).
4323. Baldrian, K. Wie könnte Lese- und Schreibstörungen bei vollsinnigen Schüler vorgebeugt werden? (How can deficiencies in reading and writing among normal children be prevented?) *Z. Kinderforsch.*, 1938, 47, 21-27.—The author states that in contrast to normal children, for many of whom reading and writing offer great difficulties, deaf children (whose first speech is acquired by a different process) rarely experience special difficulties in either of these skills. The difference, in his opinion, is to be found in the different methods of instruction used. In the case of the deaf much more emphasis is placed upon training in close observation, and much time is spent in kinesthetic training by tracing letters and words on the desk and in the air. More emphasis is also placed upon the phonetic construction of words, and thus a synthesis between the written and spoken forms is acquired from the beginning.—F. L. Goodenough (Minnesota).
4324. Becht, H. M., & Hoppock, R. An appraisal and abstract of available literature on the occupation of the general houseworker. New York: National Occupational Conference, 1938. Pp. 12. \$0.10.—R. R. Willoughby (Brown).
4325. Brophy, L. Men must work. New York: Appleton-Century, 1938. Pp. 156. \$1.75.—Advice and suggestions on the employment problems of men, based on the author's experience as a vocational counselor, are given.—R. R. Willoughby (Brown).
4326. Brownell, W. A. Two kinds of learning in arithmetic. *J. educ. Res.*, 1938, 31, 656-664.—A comparison of learning arithmetic by repetition and by insight; the first gives greater proficiency and increased speed, and the second results in better understanding and intelligence. Evidence of this distinction is found by an examination of the literature.—S. W. Fernberger (Pennsylvania).
4327. Brueckner, L. J. General methods: educational diagnosis. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 333-340.—One result of educational diagnosis has been the resolution of major abilities into a number of specific skills, weakness in any one of which may cause a general deficiency. In this respect progress has been made in reading and arithmetic. Factors known to be associated with learning difficulties are (1) physical handicaps, (2) mental or psychological difficulties, (3) ineffective and inadequate pedagogical procedures, (4) emotional or social maladjustments, (5) unfavorable environmental conditions. Available methods of detailed diagnosis include interviews, measurement by means of analytical tests, analysis of written work or of oral responses and behavior, and laboratory or clinical procedures.—P. S. de Q. Cabot (Simmons).
4328. Buckingham, B. R. Educational research in perspective. *Sch. & Soc.*, 1938, 47, 466-470.—M. Lee (Chicago).
4329. Buswell, G. T. General methods: laboratory experimentation. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 307-318.—Laboratory experimentation in education is artificial only as to non-essentials, which are rigidly eliminated. The value of apparatus depends upon the degree to which it facilitates the process of abstracting the essential elements to be studied. Historically, the names of Wundt, Ebbinghaus, Ruger, Bryan and Harter, Book, Thorndike, Judd, and Freeman are prominent among those who have stimulated experimentation in education. Major types of research carried out by the laboratory method have been the investigation of music, reading, handwriting, speech disorders, lateral dominance, and arithmetic. Up to the present time the primary contribution of the laboratory method "has consisted in a better understanding of the nature of learning, a contribution reflected in numerous modifications in methodology."—P. S. de Q. Cabot (Simmons).
4330. Buswell, G. T., McSpadden, W. W., Pierce, A. E., Whitford, W. G., Smith, H. J., Coon, B. L.,

Colburn, E., & Brace, D. K. Selected references on elementary-school instruction. III. The subject fields—continued. *Elem. Sch. J.*, 1937, 38, 210-227. —Listed and annotated by the writers, respectively, are 32 references in the area of arithmetic, 21 in science, 11 in music, 15 in art, 12 in industrial arts, 14 in home economics, 4 in library training, and 7 in health and physical education.—P. A. Witly (Northwestern).

4331. Clark, P. E. Can college students grade themselves? *Sch. & Soc.*, 1938, 47, 614-616.—An important objective in education is to make the student independent of his instructor. One evidence of this might be the ability to evaluate one's own work. At Muskingum, after the grades were turned in for a 9-weeks period, 91 students in science and mathematics were asked to estimate their own grades. Their estimates correlated $.80 \pm .038$ with the teacher's grades. 72.5% received the same letter grade they thought they earned, 15% (superior students) received higher letter grades, and 12.1% (poor students) received lower grades. Only one student failed to estimate his grade within one letter of the right value. Further investigations of this ability in students in other subjects, and of individual differences in it, are desirable, as well as study of whether such self-appraisal might be more diagnostic and concretely related to the course objectives.—M. Lee (Chicago).

4332. Cole, L. W. The improvement of reading; with special reference to remedial instruction. New York: Farrar & Rinehart, 1938. Pp. 350. \$1.75.—R. R. Willoughby (Brown).

4333. Courtis, S. A. The interpretation of scores in tests and examinations. *J. educ. Res.*, 1938, 31, 637-649.—The scores from tests and examinations have been used as a measure of achievement, but they have been of less use as a measure of the prediction of future success of the individual. Tests and examinations were given to 21 graduate students at the University of Michigan both as tests during the semester and as final examination. These scores are treated in several ways: in terms of the number of correct answers; the number of answers attempted during the time interval; as scores compared with mental test scores; in terms of preparation and of subjective estimate. The author concludes that "The interpretation of our present test scores is a matter of scientific deduction (intelligent guess work) and very difficult. Before even a beginning of success in interpretation is achieved, two further advances will need to be made. First a measure of effort must be invented so we can tell how hard each individual is trying. Second we shall need to measure and remeasure the individual many, many times and judge of his progress in terms of his own growth curve not in terms of age or grade norms. Marks have no consistent meaning when applied to individual achievement scores."—S. W. Fernberger (Pennsylvania).

4334. Courtis, S. A. Contributions of research to the individualization of instruction. *Yearb.*

nat. Soc. Stud. Educ., 1938, 37, Part II, 201-210.—"Individualization refers wholly to the process of adjustment and in no way to the product of that adjustment. That is, individualization does not aim to increase the ruggedness of an individual's individualism." A student may be socialized in thought and feeling by individualized methods and materials. The possibilities of individualization have been stimulated by the development of intelligence tests, of special types of schools, and of the influence of the measurement movement. Important aspects of the individualization of instruction have been the improvement of textbooks, particularly concerning attractiveness and simplicity; the increasing attention paid to diagnostic and remedial teaching; the development of practice tests and workbooks, enabling each child to progress at his own rate and to help him evaluate his work; and finally special administrative devices such as the Winnetka and Dalton plans. Many attempts to appraise the results of individualization have revealed inconsistent evidence. "In terms of subject-matter efficiency, teaching effort and cost, the individualized schools appear to hold their own with the more formal schools; and at the same time to give richer products in terms of those aspects of individual development and culture that all progressive educators value."—P. S. de Q. Cabot (Simmons).

4335. Crawford, C. C., & Carmichael, J. A. The value of home study. *Elem. Sch. J.*, 1937, 38, 194-200.—The authors report the effect of home study in a school system over a period of six years, during three of which home study was prohibited. Educational products were measured each year by the Stanford achievement test. Comparisons of the test scores indicate "no significant difference between the achievement in the three years before and after home study was abolished." The writers also report that children who had been accustomed to home study made higher grades in high school than those for whom home study had been abolished. It is suggested by the writers that good results without home study may be obtained by a longer school day, better motivation, adjustment of work to child maturation, more actual teaching at school, and teaching children how to study.—P. A. Witly (Northwestern).

4336. Dickenson, H. F. Patterned responses to the examination in lieu of equivalent forms. *Sch. & Soc.*, 1938, 47, 483-484.—"Is there a practical way to section students for examination purposes without producing equivalent forms of the examination?" To answer this question freshmen at Lincoln Memorial University were divided into several sections and a control group on the basis of the Otis and an achievement test. Each section has been given a different response pattern, using the 4 letters of a word for multiple choice and recognition examination questions. No statistically reliable difference was found between the scores of the patterned-response-sectioned examination scores and the scores of the control group taking the examination under regular classroom conditions. However, by this device

more independent effort seems to be encouraged and the morally immature student may be protected against temptation.—*M. Lee* (Chicago).

4337. Dolch, E. W., & Bloomster, M. **Phonic readiness.** *Elem. Sch. J.*, 1937, 38, 201-205.—An investigation was conducted by the authors to determine the relationship between children's mental development and their phonic attainment; a high correlation between the two factors is reported. The study indicates that "a mental age of seven years seems to be the lowest at which a child can be expected to use phonics." The study suggests also that while children of high mental age sometimes fail to acquire phonic ability, children of low mental age are certain to fail.—*P. A. Witty* (Northwestern).

4338. Dolsdorf, K. **Der Einfluss der Schulturnens auf Charakter und Gesinnung der Jugend.** (The influence of school gymnastics upon the character and attitudes of adolescents.) Erlangen: K. Döres, 1937. Pp. 60.—*R. R. Willoughby* (Brown).

4339. Douglass, H. R., & Bauer, H. C. **The study practices of three hundred ninety-five high-school pupils.** *J. educ. Psychol.*, 1938, 29, 36-43.—To 395 boys and girls in five high schools of medium size in Minnesota were administered check lists or questionnaires for the purpose of gathering data relative to their attitudes and practices, particularly the latter, with respect to study. A comparison of such data with IQ's and school marks revealed the following trends: (1) At all levels of intelligence the practice of looking up new words in the dictionary is positively associated with better marks. (2) Of pupils of superior intelligence, those who make the most regular practice of skimming over material before reading in detail make better marks. (3) Reading without moving the lips is the more usual practice of those who make the highest marks. (4) Those who usually get their lessons thoroughly from day to day in order to avoid cramming tend to do slightly better than those who do not, especially in the group of slightly superior intelligence. (5) A slight superiority in marks seems to go with "studying for a class just before it begins" for the 111-120 IQ group. (6) Of the least intelligent group, those who always reviewed notes before examinations made better marks than those who did so usually or only occasionally, though no similar difference could be noted for other intelligence groups.—*H. W. Karn* (Pittsburgh).

4340. Drake, R. **Two methods of teaching high school algebra.** Answer to "A Criticism." *J. educ. Res.*, 1938, 31, 683-685.—*S. W. Fernberger* (Pennsylvania).

4341. Drever, J. **Examinations.** In *Various, Festskrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 200-206.—On the background of the results obtained, especially in England and France, by representatives of the International Examination Inquiry, originated by the International Institute of Education of Columbia University, the writer states that examinations as at present conducted in

schools and universities are alarmingly unreliable. "Competitive," "progress," and "qualifying" examinations are discussed.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4342. Eliasberg, W. **Psychologie der höheren geistigen Berufe.** (The psychology of the learned professions.) *Ned. Tijdschr. Psychol.*, 1938, 5, 401-405.—Psychological studies of the learned professions have failed to take into account such sociological factors as social status and the problems of the neophyte.—*H. Beaumont* (Kentucky).

4343. Elkind, H. B., & Middleton, H. R. **A psychiatrist looks at remedial teaching.** *Understanding the Child*, 1938, 7, 14-19.—The authors feel that in the evaluation of the causes of reading disabilities and the effects of remedial teaching more attention should be paid to the dynamic factors involved in learning.—*M. Keller* (Brown).

4344. Embree, R. B., Jr., & Floyd, O. R. **The predictive value of general science.** *J. educ. Res.*, 1938, 31, 650-655.—A study of the predictive value of a course in general science for success in other science courses. The University High School offers general science in the 9th grade, biology in the 10th, and chemistry and physics in the 11th and 12th. The subjects were also tested with five different group intelligence tests. The results for the test scores and for grades are treated by the correlation methods. The author concludes that "achievement in general science is not significantly superior as a predictive instrument to a measure of total achievement in all ninth grade subjects" and that "none of these factors, even when supported by intelligence quotients, are sufficiently accurate for prediction in individual cases."—*S. W. Fernberger* (Pennsylvania).

4345. Gray, H. A. **Recorded sound in the field of achievement testing.** *J. educ. Res.*, 1938, 31, 608-615.—Study of the validity, improvability and practicability of substituting sound records in place of the examiner's voice or the printed word for achievement testing. Tests were adopted from the arithmetic reasoning, language usage, and spelling sections of the Modern school achievement test. These were given to 370 pupils in both the sound disk and paper test form. On the whole the subjects were able to detect errors in spoken language more readily than they could with the test in printed form. In arithmetic the paper tests gave the higher critical ratios. The results for the spelling test were inconclusive, with four of the seven grade groups favoring the paper form.—*S. W. Fernberger* (Pennsylvania).

4346. Gray, W. S. **Selected references on teacher education.** *Elem. Sch. J.*, 1937, 38, 296-305.—Listed and annotated by the writer are 70 references in the area of teacher education published between July 1, 1936, and June 30, 1937.—*P. A. Witty* (Northwestern).

4347. Hegge, T. G., Kirk, S. A., & Kirk, W. D. **Remedial reading drills.** Ann Arbor, Michigan: George Wahr, 1936. Pp. 49.—A clinical approach

to the problem reading is presented in this manual and the exercise book of 55 drills which it accompanies. The manual has a chapter with suggestions as to diagnostic procedures, followed by: a description of the drills; directions for remedial treatment; supplementary remedial methods; and case illustrations. The exercises are suitable for retarded readers in the first, second or third grades only; they are primarily individual rather than group work; and they can function only when mental age, auditory function, physical equipment, motivation, and other factors are favorable. The first stages of the drills are phonic in nature, dealing with the introductory sounds in words taken from Thorndike's *Teachers' Wordbook*. Part II deals with combinations of sounds built up from those learned in Part I. Part III deals with more advanced and less frequent sounds, and Part IV gives exceptions for sounds given earlier, word building exercises, and exercises on sounds whose letters are frequently confused.—*D. Bailey* (Mt. Holyoke).

4348. Hendrickson, G. Needed research in music education. *J. educ. Res.*, 1938, 31, 672-677.—Twelve problems are suggested, ranging from such educational problems as reminiscence, the management of practice, and adult learning of music, to such psychological problems as the improvement of auditory imagery, eye movements in reading music, transfer of training in music, and clinical studies of musically deficient children. Bibliography of 20 titles.—*S. W. Fernberger* (Pennsylvania).

4349. Heuer, H. Die social-biologischen Verhältnisse der Aufbauschüler. (The social-biological background of opportunity-school children.) *Z. Kinderforsch.*, 1937, 46, 346-398.—A statistical study of the family backgrounds of children selected on the basis of superior ability for transfer from the folk schools to special opportunity schools in which college preparatory training is given.—*F. L. Goodenough* (Minnesota).

4350. Hilliard, G. H., & Torzell, E. Informational background as a factor in reading readiness and reading progress. *Elem. Sch. J.*, 1937, 38, 255-263.—The writers report a three-year investigation of "the relative effects of rich and meager informational backgrounds on reading readiness and on progress in developing fundamental reading abilities as measured by recognized reading tests." The study indicates that children with rich backgrounds are better equipped for reading than are pupils with meager backgrounds. The authors conclude that a large task of the kindergarten teacher is to enrich and broaden children's backgrounds.—*P. A. Witty* (Northwestern).

4351. Hockett, J. A. A comparative analysis of the vocabularies of twenty-nine second readers. *J. educ. Res.*, 1938, 31, 665-671.—A listing of all the different words in 29 second readers, which are listed, yields data regarding the number of words in each book, the number of different words, and the average repetition. A comparison is made of each

book with the frequency of occurrence in Gates' word list.—*S. W. Fernberger* (Pennsylvania).

4352. Hoppock, R. An appraisal and abstract of available literature on occupations in journalism. New York: National Occupational Conference, 1938. Pp. 12. \$0.10.—*R. R. Willoughby* (Brown).

4353. Hutchinson, J. B., & Pugh, B. M. A note on the importance of differences between examiners in the estimation of ability of students. *Ann. Eugen., Camb.*, 1938, 8, 107-116.—The examination marks of 25 students in 8 subjects, together with the class marks, were subjected to an extensive analysis-of-variance treatment. It was found that the examiners varied as much among themselves as did the subjects, and it was suggested that students' marks be adjusted to a common basis. Examiners were found to vary widely in their standards of marking from time to time. Differences between students' marks are due in part to the subjects studied, but in part also to variation in standards of various examiners.—*J. W. Dunlap* (Rochester).

4354. Kączkowska, J. Poradnictwo zawodowe w Polsce. (Vocational advice in Poland.) *Psychotechnika*, 1937, 11, 4-14.—In 1935 there existed in Poland 27 vocational bureaus, which dealt mainly with the graduates of common schools. The author discusses the problems of vocational advice, which she divides into pedagogical, social, economic, and medical. She states that the value of vocational advice depends mainly on the personality of the vocational advisor.—*S. Blachowski* (Poznań).

4355. Keys, N. The underage student in high school and college; educational and social adjustments. *Univ. Calif. Publ. Educ.*, 1938, 7, 145-272.—A presentation of the results of two research projects: one of underage students at the University of California, the other of accelerated pupils at the public high schools in Oakland, California. The young group is compared with a control group in regard to home and school background, scholastic achievement, student activities, graduation and later careers, attitudes toward acceleration, and in the case of the high school students, physical condition and personality adjustment. The findings favor acceleration before the entrance to senior high school.—*J. P. Robertson* (Brown).

4356. Kunicka, J., Żebrowska, M., & Rybicka, E. Plan monografii klasy szkolnej. (A plan for a monograph about a school class.) *Polsk. Arch. Psychol.*, 1936/37, 9, 1-40.—A detailed plan meant to facilitate the investigation of the behavior of a class as a whole by school psychologists.—*S. Blachowski* (Poznań).

4357. Learned, W. S., & Wood, B. D. The student and his knowledge. *Carnegie Found. Adv. Teaching Bull.*, 1938, No. 29. Pp. xx + 406.—Findings are reported in the Carnegie study of the relations of secondary and higher education in Pennsylvania, based on 10 years of testing and research. Carefully devised tests, designed to test general knowledge felt essential for one liberally

educated, were given to 26,000 high school seniors and to students in nearly 50 Pennsylvania colleges, with later retests. These revealed tremendous individual variation in knowledge and progress in learning for any one grouping. Such contrasts as the superiority of scores for one-quarter of the high school seniors to the average of the college sophomores, the superiority in achievement of 15% of the freshmen to 72% of the seniors in one college, and that of many high school graduates not going to college to those who did, lead to conclusions such as the following: students' knowledge and progress in learning can be effectively measured; greater emphasis must be placed on self-education; our "pseudo-standards" of time and credits must be abandoned; there must be a concentration on the strategy of dealing with other essentials of education than knowledge, such as originality, insight, understanding, and tolerance. A summary of more important results is presented in compact form in the introduction. Many group contrasts are shown in tabular form.—*D. Bailey* (Mt. Holyoke).

4358. Leonard, J. P. The effect of recent research upon the selection and placement of items of grammar in the secondary school curriculum. *J. educ. Res.*, 1938, 31, 599-607.—Historical analysis of the problem and resulting changes. Bibliography of 48 titles.—*S. W. Fernberger* (Pennsylvania).

4359. Leuck, M. S. Fields of work for women. (3rd ed.) New York: Appleton-Century, 1938. Pp. 445. \$2.75.—*R. R. Willoughby* (Brown).

4360. Lord, E. E. Subject disabilities: a cause. *Understanding the Child*, 1938, 7, 10-13.—*M. Keller* (Brown).

4361. Major, C. L. The percentile ranking on the Ohio State University psychological test as a factor in forecasting the success of teachers in training. *Sch. & Soc.*, 1938, 47, 582-584.—Students with a score of less than 30% in the Ohio test are discouraged by the administrative staff at Denison University from teaching as a profession. To test the reasonableness of this ruling student teachers were rated by their professors and by themselves as to their success. On the basis of 100 students so rated a correlation of only .14 \pm .06 was found between success in teaching and percentile score on the psychological test. Several explanations for this low r are discussed, and the questions are raised whether the Otis really measures the type of intelligence needed in teaching and whether our present measurements of teaching ability are adequate.—*M. Lee* (Chicago).

4362. Monroe, M. Preventing reading failures in the first grade. *Understanding the Child*, 1938, 7, 19-22.—*M. Keller* (Brown).

4363. Monroe, W. S. General methods: classroom experimentation. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 319-327.—The beginnings of controlled classroom experimentation date from the last decade of the nineteenth century. Interest in this type of research developed in the years 1900-

1910, and although the construction of tests gave impetus to the movement after the latter date, the number of research studies did not materially increase until after 1920. Since 1923, the "equivalent-group method has become the dominant experimental procedure. The one-group method is generally regarded as inadequate and the rotation method is seldom employed." Generally "the direct contributions from controlled experimentation have been disappointing." The limitations may be due to inadequate specification of the experimental factor, a doubtful control of non-experimental factors, and the unsatisfactory measurement of the dependent variable. "The future of classroom experimentation is difficult to predict."—*P. S. de Q. Cabot* (Simmons).

4364. Morgaut, M. E. Les intérêts de l'enfant et l'orientation professionnelle. (The interests of the child and professional orientation.) Orleans: Office d'Orientation, 1936. Pp. 151.—The author examined 750 records of children from the point of view of professional orientation. Using the facts relative to taste and character and reasons for choice of vocation, he picked out the factors which appeared to be important in governing professional interests. In general the sources of the interests fell into 3 groups: material motives, suggestion, the play of primitive tendencies. The author emphasized the practical importance in professional orientation of giving attention to tastes and interests along with aptitudes.—(Courtesy *Année psychol.*).

4365. Myers, C. E., Ruch, G. M., & Loofbourow, G. C. Myers-Ruch high school progress test. Yonkers-on-Hudson: World Book, 1938. \$1.30 per package of 25 tests.—This is primarily a survey test designed to measure general achievement of classes, schools, or school systems, and specifically adapted for state-wide, county-wide and city-wide testing programs. It covers the four major high-school subject fields, mathematics, science, social studies, and English, and can be administered in an hour. Percentile norms are based on approximately 9000 cases from a large number of communities in six states. Stepped-up split-half reliability coefficients range from .84 to .93 for grades 9 to 12.—*M. Keller* (Brown).

4366. New Jersey Secondary School Teachers' Association. Guidance standards for secondary schools. Elizabeth, N. J.: George R. Iles, 1937. Pp. x + 50.—This paper is based on facts and opinions furnished by about 1400 teachers and administrators in New Jersey schools. Quotations from the 1937 statement of the National Vocational Guidance Association give "an authoritative expression of the aims of guidance."—*F. G. Allen* (Brown).

4367. O'Brien, F. J. A child guidance approach to the treatment of a severe reading disability. *Understanding the Child*, 1938, 7, 22-26.—*M. Keller* (Brown).

4368. Oldham, H. W. A psychological study of mathematical ability, with special reference to school mathematics. II. *Brit. J. educ. Psychol.*, 1938, 8, 16-28.—Statistical treatment of tests given

to 410 pupils resulted in conclusions that there is no indication of any large group factor in arithmetic, algebra, and geometry, taken in pairs; also no indication of anything more than a very small group factor running through the three abilities. This is indication of the specific nature of each of the three abilities as shown by significant tetrad differences. Overlapping factors between algebra and geometry appear not to be intrinsic to the activities, but functions of extraneous influences such as teaching methods. It is not justifiable to place the three subjects in one class for purposes of examination.—*K. M. Cowdery* (Stanford).

4369. Phillips, W. The general influence of studies. I. *Brit. J. educ. Psychol.*, 1938, 8, 50-62.—The author repeats a previous summary of modern opinion on "mental training" or "formal discipline." He points out that explanations of "spread" or "transfer" of training have depended on recognition of common elements, but finds these inadequate. He recognizes specific results of analyses of the "common element" type both subjective and objective, and a general result, a subconscious or conscious recognition of a common form, either of which may lead to handling a second problem in a way modified by a previous experience. "Spread of training" is recommended to describe the situation when the student is not aware of the reason or method in doing the second operation, "transfer of training" to describe it when the student recognizes similarities such that methods used in training are consciously adopted in the later task.—*K. M. Cowdery* (Stanford).

4370. Portenier, L. A twelve-year study of differentiated groups of high-school pupils. *J. educ. Psychol.*, 1938, 29, 1-13.—This study was begun in 1923, when the author was assigned two differentiated groups for a course in algebra. Group A, an accelerated group, was composed of 30 pupils who were considered by their classroom teachers and the principal as exceptionally well adjusted in their school work and were rated as very superior on the basis of three criteria used for classification. Group B, a retarded group of 22 pupils who on the basis of teachers' judgments were some of the most poorly adjusted in their school work, were for the most part rated very inferior according to the three criteria. In the follow-up study an attempt was made to gather as much information as possible concerning the extent, kind, and quality of education each pupil received. The fields of employment after leaving school and the success of each individual as measured by promotions, remuneration, and rating of employers and co-workers were recorded. Their interests other than vocational were also recorded, and some estimates of the degree of personal and social adjustment secured. The comparison made after 12 years indicates that, although most of group A were still far superior in achievement, most of group B appeared to have made about as satisfactory adjustment to their surroundings.—*H. W. Karn* (Pittsburgh).

4371. Pratt, K. C. Intelligence as a determinant of the "functional" value of curricular content. *J. educ. Psychol.*, 1938, 29, 44-49.—The ACE psychological examination blanks of 1229 freshmen matriculating at a teachers' college from 1931 through 1935 furnished the data of this study. An analysis reveals that students who employ algebraic procedures and thought in the solution of the arithmetic problems make a higher score on that section than do those who employ arithmetical procedures exclusively. Furthermore, students who employ algebraic procedures make a higher score on the other portions of the examination than do those who use arithmetical methods only. If the scores on this test are an index of the intelligence of the individual it is obvious that effective retention and use of learned materials depend upon superior intelligence. On this basis it may be affirmed that intelligence is one of the chief determinants of the "functional value" of curricular content.—*H. W. Karn* (Pittsburgh).

4372. Rath, L. Appraising certain aspects of student achievement. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part I, 89-117.—A testing program sensitive to the needs of the principles of guidance should reveal clarified objectives, methods of recording student achievement, and the formulation of economical ways for interpreting available records. Chosen as a sample of a comprehensive array of achievement tests developed over the last five years, examples are given to illustrate and measure certain aspects of thinking such as the interpretation of data, the application of logical principles, the application of principles to problems in science and in the social studies, the development of attitudes toward social issues, and the appreciation of literature.—*P. S. de Q. Cabot* (Simmons).

4373. Rehfeld, A. Skoletanker. (Thoughts about the school.) *Ugeskr. Laeg.*, 1938, 100, 324-325.—This is a discussion from the viewpoint of a physician of a booklet recently published by a school superintendent, Thorkil Jensen, in which the present Danish high school plans and curricula are severely criticized from the point of view of the welfare of the growing adolescent girl and boy. Definite changes are advocated.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4374. Ribsskog, B. Elevenes alder og laerernes evneevurdering. (The age of pupils and teachers' evaluation of their ability.) In *Various, Festschrift til Anathon Aall*. Oslo: Aschehoug, 1937. Pp. 182-191.—The article gives the results of a comparison between the abilities of grade school children as measured by Dearborn's and Mønnesland's group tests and as ranked by the teachers either in the three classes *below average*, *average*, *above average*, or in general rank order from best to worst within the class. When teachers used general rank order they underestimated the younger and overestimated the older within the class; when arranging the pupils of a class in three groups they were prone to put more in the class below average

than in the class above average.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

4375. Ryan, W. C. *Mental health through education*. New York: Commonwealth Fund, 1938. Pp. viii + 315. \$1.50.—The author, after a year's (1935-1936) careful study and observation of the actual situations in various schools and clinics in different parts of the country, has produced this book to show how our educational system should apply some of the scientific findings in mental hygiene for the development of young children. The book consists of twelve chapters, suggesting a re-orientation of the educational task, a better facilitation for emotional development of the pupils, a more adequate preparation of teachers, curriculum reorganization, humanizing administration, effective use of the special services such as those of visiting teachers and child guidance clinics, mediating between the school and the home, and active participation in community life for mental health. A large number of references are provided throughout the book.—*K. S. Yum* (Chicago).

4376. Ryans, D. G. *The differential performance of high, medium and low intelligence groups on repeated tests in general psychology*. *Sch. & Soc.*, 1938, 47, 549-551.—Since mental tests predominantly measure the recognition and recall strength of common experiences, it may be assumed that retention will vary with intelligence-test performance. To demonstrate this the same objective achievement test in psychology was given 3 times at weekly intervals to a junior class at William Woods College. By dividing the group into 3 sections according to their IQ's and comparing the percentile scores in the 3 tests for the 3 groups, a tendency of intelligence and achievement to become increasingly coincident was shown, though it was too slight here to be statistically significant. Another explanation for the finding is that the more intelligent student may have more scholastic interest. At any rate, "each of the 3 groups maintained its original position with respect to the others and there were some indications of a trend toward increased retention on the part of the more intelligent, accompanied by a slight decrease of the less able upon repeated testing."—*M. Lee* (Chicago).

4377. Sand, H. J. *An evaluation of the effects of marks as incentives to pupil growth in spelling ability and of the comparative values of equated scales and informal tests as measurements of the progress*. *J. educ. Res.*, 1938, 31, 678-682.—At the beginning of the semester three spelling tests were given to all English classes at a junior high school in Minneapolis. In all, 2087 pupils were tested by one or another of these scales. This was repeated at the end of the semester after a study of about 250 words during the semester period. The author concludes that "the data indicate that an emphasis on the social value of correct spelling and the learning to spell for the resulting self-satisfaction of such accomplishment consistently strengthens the learn-

ing bond to a greater degree than the conventional method."—*S. W. Fernberger* (Pennsylvania).

4378. Sanford, C. M. *Developing teacher personality that wins*. Evanston, Ill.: Row, Peterson, 1938. Pp. 160. \$1.60.—A practical manual on problems of teacher personality and pupil guidance prepared for teachers.—*R. R. Willoughby* (Brown).

4379. Schneider, H. *The problem of vocational guidance*. New York: Stokes, 1938. Pp. vii + 108. \$1.60.—This is an introduction to the study of vocational guidance. It consists of twelve chapters, without titles, briefly dealing with individual differences, discovery of self and subsequent development, individuality with general and specific characteristics, individual aptitude and preference, a variety of talents, personality, vocational training, qualifications for a vocational counselor, vocational guidance and "follow-up" studies, etc. The author has been active in vocational counseling for 32 years.—*K. S. Yum* (Chicago).

4380. Sekreta, M. *O psychicznym ustosunkowaniu się nauczycieli szkół powszechnych do nauczycielskiego zawodu*. (The psychological adjustment of public school teachers to the teaching profession.) *Kwart. psychol.*, 1937, 9, 333-400.—A study based on the replies of 250 teachers to an attitude questionnaire. The replies fall into four groups, the extreme and moderate idealists and the extreme and moderate realists. These distinctions are based on types of motivation (idealistic and materialistic) and on emotional tone (enthusiasm or depression).—*T. M. Abel* (Trade Extension Classes, New York City).

4381. Spłth, A. *Wie lange soll die Anstaltserziehung für einen normalen Jugendlichen dauern?* (How long should the institutional education of a normal adolescent last?) *Zbl. Jugendr. Jugendwohlf.*, 1938, 28, 77.—Too long an education in an institution has disadvantages, especially in regard to the development of sexuality. From 9 to 18 months should be the longest time for a normal adolescent.—*P. L. Krieger* (Leipzig).

4382. Spiegler, S., & Hoppock, R. *An appraisal and abstract of available literature on the occupation of the accountant*. New York: National Occupational Conference, 1938. Pp. 10. \$0.10.—*R. R. Willoughby* (Brown).

4383. Spiegler, S., & Hoppock, R. *An appraisal and abstract of available literature on occupations in advertising*. New York: National Occupational Conference, 1938. Pp. 12. \$0.10.—*R. R. Willoughby* (Brown).

4384. Spiegler, S., & Hoppock, R. *An appraisal and abstract of available literature on the occupation of the architect*. New York: National Occupational Conference, 1937. Pp. 8. \$0.10.—*R. R. Willoughby* (Brown).

4385. Stogdill, C. G. *Subject disabilities: a symptom*. *Understanding the Child*, 1938, 7, 7-9.—*M. Keller* (Brown).

MENTAL TESTS

4386. Strang, R. Resources for the consultant. *J. consult. Psychol.*, 1938, 2, 60-62.—"There is an interest in the development of new reading tests on all educational levels." Increasing attention is being paid to the diagnostic aspects of tests. Information about the description, reliability and validity of the following tests is given: Durrell-Sullivan reading capacity and achievement, Durrell analysis of reading difficulty, Traxler silent reading. Mention is made of new tests under construction. Criticisms of existing tests are: (1) they represent an artificial rather than a natural reading situation; (2) they are insufficiently diagnostic; (3) they do not test the higher levels of reading ability.—*P.S. de Q. Cabot* (Simmons).

4387. Tyler, R. W. The specific techniques of investigation: examining and testing acquired knowledge, skill and ability. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 341-355.—During the first thirty years of the achievement testing movement four major influences can be traced: (1) the standardization of test items and conditions, (2) the conception of measurement dominating the physical sciences in the 19th century, (3) the intelligence testing movement, (4) the subjectivity and unreliability of traditional examinations. Contributions of achievement testing to educational philosophy have been (1) better understanding of learning, (2) improvement in selection of significant test content, (3) improvement in materials and instructional methods, (4) stress upon interpretation of significant common standards, (5) development of the concept of educational diagnosis. The second period of achievement testing, dating from about 1927, has been marked by (1) criticisms of the earlier development, (2) extension of the range of objectives tested, (3) co-operative construction of tests, (4) acceptance of the viewpoint that testing is one phase of learning, (5) modification of curricula.—*P.S. de Q. Cabot* (Simmons).

4388. Vernon, M. D. The drives which determine the choice of a career. II. *Brit. J. educ. Psychol.*, 1938, 8, 1-15.—As drives other than social conformity which influence university women in selecting an occupation there are found altruism, activity, independence, power, superiority, social admiration, pleasure and ease, of which activity and independence appear most frequently. From the records given it appears that different drives could operate in different individuals to produce the choice of the same career. Likewise the same, or very similar, drives could result, in different individuals, in the choice of very different careers. To determine any causal relationship between drive and career, far more knowledge of individual character is necessary.—*K. M. Cowdery* (Stanford).

4389. Witty, P. Diagnostic testing and remedial teaching. *Understanding the Child*, 1938, 7, 3-6.—*M. Keller* (Brown).

[See also abstracts 3899, 3946, 3950, 4098, 4147, 4167, 4215, 4217, 4238, 4244, 4299, 4406, 4413, 4436.]

4390. Babcock, H., & Emerson, M. R. An analytical study of the MacQuarrie test for mechanical ability. *J. educ. Psychol.*, 1938, 29, 50-55.—Analysis of the MacQuarrie test results from 300 individuals of ages 14 through 28, who were selected mainly from the New York City public schools supplemented by cases from the Vocational Adjustment Bureau for Girls and a group of college students, has demonstrated that: (1) the MacQuarrie test total score has a true positive relationship with the level of intelligence as determined by the new Terman vocabulary ($r = .62 \pm .02$); (2) the correlation between MacQuarrie total score and level of intelligence becomes greater with increases in life age between 14 and 20 years; (3) the correlations among the seven MacQuarrie subtests show that all have significant positive relationships in the 20-year group. Insignificant test interrelationships at year 14 become significant at either the 17- or 20-year chronological groupings, while such tests as had a significant relationship at the 14-year level tend to maintain this at the 17- and 20-year levels.—*H. W. Karn* (Pittsburgh).

4391. Foran, T. G., & Lenaway, M. A. Comparative difficulty of three forms of computation tests. *J. educ. Res.*, 1938, 31, 568-571.—Three tests were prepared of the same length, content, and method of scoring, but of unequal difficulty. These were given to 1026 pupils in three Detroit parochial schools. An analysis of the results indicates that the differences in difficulty do not give significantly different results.—*S. W. Fernberger* (Pennsylvania).

4392. Rao, K. G. R. A test of general ability for use with Indian children. *Indian J. Psychol.*, 1937, 12, 207-210.—The author presents the results of an investigation into the factor content of several tests applied to an unselected population of some 350 children between the ages of 10 and 14. He finds that primarily non-verbal, perceptual tests meet more accurately the requirements for diagnosing general ability.—*L. A. Averill* (Worcester Teachers College).

4393. Rao, N. J. A note on the evaluation of the true-false and similar tests of the new-type examination. *Indian J. Psychol.*, 1937, 12, 176-179.—The author points out scoring fallacies of the true-false and multiple-choice tests and suggests the need of applying adequate correctives and of finding the actual reliability of the tests.—*L. A. Averill* (Worcester Teachers College).

4394. Studencki, S. O rewizji testów psychotechnicznych. (Concerning a revision of psychotechnical tests.) *Psychotechnika*, 1937, 11, 57-64.—The author proves that alternative tests are worthless, that tests should be constructed from materials as various as possible in order to provoke characteristic symptoms in the persons investigated, that they should provoke in the person investigated a trial-and-error attitude, and that they should offer an

opportunity for the observation of character.—S. Blachowski (Poznań).

4395. Targoński, H. Uwagi o stałości niektórych testów. (Remarks on the reliability of certain tests.) *Psychotechnika*, 1937, 11, 127-131.—About 15 of the tests used in the railroad psychotechnical laboratories have been examined as to their reliability. It was discovered, among other things, that the highest coefficient of reliability is shown by the tests of general intelligence; the next highest by the attention tests; the next by the psychomotor tests; and the lowest by the memory tests.—S. Blachowski (Poznań).

4396. Watson, G. The specific techniques of investigation: testing intelligence, aptitudes and personality. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 357-373.—A discussion on the historical development of intelligence testing arising from the study of individual differences, on the stimulation of the testing movement by the world war, the bearing of tests upon the mentally inferior and the mentally superior, on curricula and the administration of school programs, on college entrance requirements, on delinquency, occupational guidance, adult education, sex differences and co-education, racial and social differences, and on the nature-nurture controversy. "There is a great need of more developmental studies." Aptitude tests are considered as to origins and their bearing on vocational guidance. The development of personality tests is discussed as well as their influence upon school clinics.—P.S. de Q. Cabot (Simmons).

4397. Wytyczak, L. Analiza psychologiczna testu Ebbinghausa. (A psychological analysis of Ebbinghaus' test.) *Lwów: Gubrynowicz*, 1935. Pp. 29.—Only about 30% of the blanks in Ebbinghaus' test are filled in by the use of the reasoning faculty. Most of the blanks are filled in with the aid of memory or linguistic intuition, and often by chance. Ebbinghaus' test in its present form is unsuitable for use as an intelligence test.—S. Blachowski (Poznań).

[See also abstracts 3808, 3899, 3974, 3980, 4409.]

CHILDHOOD AND ADOLESCENCE

4398. [Anon.] Modern concepts of child development. Columbus, O.: American Education Press, 1938. Pp. 31. \$0.25.—R. R. Willoughby (Brown).

4399. Baedorf, K. Zur Frage des "Aufzuchtswertes" besonders der geistigen Entwicklung Unreifegeborener unter 1700 g. Geburtsgewicht. (The question of prognosis in reference to the mental development of prematurely born children with birth weight under 1700 grams.) *Z. Kinderheilk.*, 1937, 59, 218-235.—Of 27 cases later studied at ages varying from 5 to 17 years, 22 were of normal intelligence, one (injured at birth) was an imbecile, and 4 were of borderline ability or slightly backward.—F. L. Goodenough (Minnesota).

4400. Bakwin, R. M., & Bakwin, H. Psychologic care during infancy. *J. Pediat.*, 1938, 12, 71-90.—R. R. Willoughby (Brown).

4401. Bergeron, M. Les manifestations motrices chez l'enfant de la naissance à trois mois. (Motor manifestations in infants from birth to three months.) *Ann. méd.-psychol.*, 1938, 96, 367-373.—Altogether the spontaneous movements and reflex activity of 11 infants were observed from birth to the age of three months. Contrary to some previous reports, unilateral movements were observed during this period. They most frequently occurred in the right forearm between the 30th and 97th days. The plantar reflex was elicited with a knitting needle. The responses were extremely variable.—M. B. Mitchell (New York City).

4402. Bischoff, H. Krämpfe im Kindesalter. (Convulsions in childhood). *Beih. Arch. Kinderheilk.*, 1937, 11. Pp. 64.—Although the immediate cause of convulsions is usually some physical or physiological condition, the fact that under the same circumstances some children have convulsions and others do not forces us to differentiate between two kinds of underlying factors, those which predispose an individual to show convulsions and those which precipitate the attack when a predisposition exists. A further division may be made into (1) those cases in which an organic base is known to exist, as in encephalitis or meningitis, or in cases of cerebral tumors or congenital lues; (2) those in which an organic base may exist but its nature has not been established, as in the epilepsies, and (3) those believed to be purely functional in character, as in spasmodophilia and hysteria. A concise description with a guide for differential diagnosis of each of the main types of convulsive disorder is given, together with a discussion of the etiological factors involved and suggestions for treatment.—F. L. Goodenough (Minnesota).

4403. Braceland, F. J., Bond, E. D., Appel, K. E., Palmer, H. D., & Strecker, E. A. Symposium on behavior problems in childhood. *Penn. med. J.*, 1937, 41, 180-196.—R. R. Willoughby (Brown).

4404. Chornyak, J. The egocentric, emotionally unstable type of psychopathic child; some remarks on etiology. *Penn. med. J.*, 1938, 41, 364-366.—R. R. Willoughby (Brown).

4405. Conn, J. H. A psychiatric study of car-sickness in children. *Amer. J. Orthopsychiat.*, 1938, 8, 130-141.—The results of a series of play contacts with 25 car-sick children between 6 and 12 years of age compared with a similar group of children not car-sick showed that the personality of the child and his life situation were etiologically significant for the car-sickness. The sickness appeared to emerge from the life and imaginings of the child, and in several cases the fears of the dark, general apprehensiveness, and timidity improved along with the car-sickness.—J. McV. Hunt (Brown).

4406. Davis, J. E. Play and mental health; principles and practice for teachers. New York: A. S. Barnes, 1938. Pp. 218. \$2.50.—A discussion

of play as usable material for the organization of effective mental hygienic practices in school is given.—*R. R. Willoughby* (Brown).

4407. Dearborn, W. F., & Rothney, J. W. M. Scholastic, economic and social backgrounds of unemployed youth. *Harvard Bull. Educ.*, 1938, No. 20. Pp. xi + 172.—An analysis of the backgrounds of unemployed youth contrasted with those of young people who are employed. No real differences were found between employed, irregularly employed and unemployed in chronological age, city of residence, occupational training, length of high school training, attitude toward education, certain anthropometric measurements and skeletal development at ages eight, twelve and sixteen, subject fields thought to be most valuable while at school, subject fields liked best at school, and mean school absences, school tardiness, school marks, intelligence scores, reading and arithmetic test performances, points earned in extra-curricular activities, and first grade teachers' ratings on fifteen personality characteristics. Significant differences between employed and unemployed were found with respect to ethnic origins, methods of securing employment, work for remuneration while at school, and attendance at educational institutions beyond the high school level. "Our findings do indicate a need for 'guidance' in the broadest use of the term."—*P. S. de Q. Cabot* (Simmons).

4408. Dennis, W. Historical notes on child animism. *Psychol. Rev.*, 1938, 45, 257-266.—The recent predominance of tests and measures of mental growth in child psychology has led attention away from the problem of animism, so that Piaget's emphasis on this topic seems novel. But the study of child animism dates back at least to Tiedemann's writings in 1787. Other writers have stressed the phenomenon, notably Hall and Sully in recent times.—*A. G. Bills* (Cincinnati).

4409. Dwyer, R. M. A note on resistance and rapport in psychological tests for young children. *J. genet. Psychol.*, 1937, 51, 451-454.—Cases are cited to illustrate procedures that proved effective in handling pronounced initial resistance of young children to psychological tests, without decrement of test score so far as could be determined.—*E. Heibredner* (Wellesley).

4410. Engel, E. Das Elektrokardiogramm des gesunden Frühgeborenen, Neugeborenen und Säuglings. (The electrocardiograms of healthy prematurely born, full-term newborn, and older infants.) *Z. Kinderheilk.*, 1937, 59, 359-378.—Electrocardiograms were made of 8 premature and 44 full-term newborn infants and of 75 additional cases between the ages of 1 and 10 months. All the time relationships were shorter than those for adults. The curves for the premature infants were indistinguishable from those for the children born at full term. The electrocardiograms of a pair of identical twins were practically identical with each other.—*F. L. Goodenough* (Minnesota).

4411. Farth, E. Säuglings-frühsterblichkeit in Oesterreich. (Infant mortality in Austria.) *Arch. Kinderheilk.*, 1937, 112, 158-167.—Infant mortality during the first year decreased from a rate of 140.8 per thousand living births in 1923 to 93.6 in 1936.—*F. L. Goodenough* (Minnesota).

4412. Fiedler, M. Zakres wyobrażeń i pojęć w pierwszym roku nauki. (The field of representations and concepts in the first school year.) *Prace psychol.*, 1938, 1, 100-117.—On the basis of an investigation of 106 children from 10 different schools, the author asserts that the mental stock of children in the first year of school depends on: (1) their environment (rural or urban); (2) their milieu (intelligentsia or proletariat); and (3) their sex (girls possess a mental stock that is quantitatively inferior to that of boys; boys know other domains of reality better than girls do).—*S. Blachowski* (Poznań).

4413. Freeman, F. S. Contributions to education of scientific knowledge about individual differences. *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 405-420.—The basic factors contributing to individual differences are heredity and environment, while secondary ones are age, "race," nationality, sex, physique, and personality. Evidence from different fields of investigation shows "that the extreme hereditarian interpretation of individuality which ascribes little or no significance to developmental conditions in human mental growth must be abandoned." Since individual differences have been observed in early infancy, the nursery school and early home training assume new theoretical importance. No reliable innate differences have been discovered in studies of racial groups, although significant cultural differences exist. "Girls show the same range, variation, consistency and inconsistency of abilities, interests, and purposes as boys." The common conclusion that mental development is unaffected by physical deficiencies is not necessarily true of cases where health factors were influential at birth or before. Educational prognosis and prediction are possible only because one maintains his relative intellectual level throughout life; and in general, there is "a high degree of correspondence among an individual's abilities in the usual variety of school subjects." One educational provision for individual differences is homogeneous grouping. While the distinction between nature and nurture is artificial, it seems clear that the sooner optimal conditions for development are provided for each child the less significant will be the limitations imposed by nature.—*P. S. de Q. Cabot* (Simmons).

4414. Gheba, U. S. Difficult children and their treatment. *Indian J. Psychol.*, 1937, 12, 214-221.—The author pleads for early attention by child-guidance clinics to problem or maladjusted children. He interprets the behavior of difficult children principally in terms of the Freudian or Adlerian terminology.—*L. A. Averill* (Worcester Teachers College).

4415. Greulich, W. W., Day, H. G., Lachman, S. E., Wolfe, J. B., & Shuttleworth, F. K. A handbook

of methods for the study of adolescent children. *Monogr. Soc. Res. Child Developm.*, 1938, 3, No. 2. Pp. xvii + 406.—Each chapter includes the present status of a given subject-matter, methods, literature references, and illustrations. The work is divided into five major portions. Part I has to do with anatomical aspects, namely anthropometry, skeletal development, the skin, and genital changes. Part II includes biological and physiological aspects of skin, blood, respiration and energy metabolism, digestive organs and functions, and urine and feces. Part III is concerned with the medical and clinical aspects of skin, dentition, circulation, posture, and physical fitness tests. Part IV presents psychological aspects of the skin, sensory phenomena, perception and imagination, motor performances, intelligence and educational achievement, special abilities, sexual behavior, and personal and social reactions. Part V covers problems not involving direct measurement of children, such as the measurable aspect of the environment, the influence of hereditary and environmental differences, and statistical considerations.—*J. P. Robertson* (Brown).

4416. Halverson, H. M. Studies of the grasping responses of early infancy: I. *J. genet. Psychol.*, 1937, 51, 371-392.—This investigation seeks to determine the conditions under which the early grasping response occurs in human infants. The relevant literature is presented and discussed under the topics: (1) date of appearance, (2) disappearance of the grasping reflex, (3) strength and tenacity of the clinging response, and (4) period of maximum strength. The results of the experimental investigations reported in this paper are presented quantitatively and are discussed under the topics: (1) reflex grasping of different materials, and (2) responses to light pressure stimulation of the palm.—*E. Heidbreder* (Wellesley).

4417. Halverson, H. M. Studies of the grasping responses of early infancy: II. *J. genet. Psychol.*, 1937, 51, 393-424.—This is the second of a series of papers on the topic stated. Experimental and quantitative data are presented and discussed under the headings: (1) clinging strength, (2) strength of the clinging response in the individual fingers, (3) hand pressure in response to a yielding object, (4) finger pressure in response to a yielding object, (5) finger pressure in response to objects which yield to varying degrees of pressure, (6) hand pressure between and during feeding periods.—*E. Heidbreder* (Wellesley).

4418. Halverson, H. M. Studies of the grasping responses of early infancy: III. *J. genet. Psychol.*, 1937, 51, 425-449.—This is the third of a series of papers on the topic stated. Experimental and quantitative data are presented and discussed under the headings: (1) relation of activity and posture to grasping, (2) finger length and clinging strength, and (3) relation of diameter of rod to clinging strength. There is a discussion of the results of the three papers considered together. The grasping reflex is regarded as a two-phase activity consisting

of finger closure and gripping (clinging). Closure occurs in response to light pressure stimulation of the palm. Gripping is a "static" proprioceptive reaction to a pull against the finger tendons. Conclusions based on a detailed analysis of the conditions of the grasping reflex are presented on the basis of the results of the three studies.—*E. Heidbreder* (Wellesley).

4419. Hewlett, I. W. Symbols and ritual—a psychological view. *Child Study*, 1937, 15, 68-69; 95.—*R. R. Willoughby* (Brown).

4420. Hohman, L. B. Conduct disorders in childhood. *J. med. Soc. N. J.*, 1938, 35, 10-17.—*R. R. Willoughby* (Brown).

4421. Jones, H. E. The California adolescent growth study. *J. educ. Res.*, 1938, 31, 561-567.—This systematic study is in its sixth year, starting with a sample of 215 cases which has now shrunk to 160. New samples are added from time to time. Experimental procedures include anthropometric measurements, body and X-ray photographs, metabolic and physiological measurements, physical ability tests, motor skill, intelligence, learning, achievement, interest, and aptitude tests, and various personality measures. Bibliography of 25 titles of articles which have been published on phases of this study.—*S. W. Fernberger* (Pennsylvania).

4422. Kanner, L. Mental hygiene during the first two years of life. *Prev. Med.*, 1938, 7, 233-237; 247.—*R. R. Willoughby* (Brown).

4423. Koeppel, H. Psyche des Säuglings und Kleinkinde. (The mind of the infant and the young child.) *Arch. Kinderheilk.*, 1938, 113, 34-39.—People in general tend to underestimate the reasoning abilities of young children. A number of illustrative anecdotes are given.—*F. L. Goodenough* (Minnesota).

4424. Kohts, N. La conduite du petit du chimpanzé et de l'enfant de l'homme. (The behavior of an infant chimpanzee and a human child.) *J. Psychol. norm. path.*, 1937, 34, 494-532.—The author reports observations on a male chimpanzee from 1½ to 4 years of age, and on her son at the same age level. She compares them in respect to appearance, posture, locomotion, expression of emotion, self-help, self-preservation, social instincts, imitation, ownership, esthetics, invention, play, gestures, vocalization, and the like. The author thinks that the superiority of the child lies in his tendency to triumph over his innate imperfections, while the chimpanzee seems to be unable to make the most of his natural gifts. The chimpanzee is a regressive being, unable and disinclined to progress.—*R. E. Perl* (New York City).

4425. Kollmann, A. Über den Zeitpunkt des Abfalles des Nabelschnurrestes bei Frühgeburten. (On the time of the dropping off of the umbilical cord in children prematurely born.) *Arch. Kinderheilk.*, 1938, 113, 24-30.—In 508 prematurely born children the time of dropping off the stump of the umbilical cord varied from the fourth to the fifty-

third day; the average was on the tenth day. This is in general later than has been reported for infants born at full term. The lower the birth weight the longer was the retention of the cord.—*F. L. Goodenough* (Minnesota).

4426. **Kunicka, J.** *Dalsze badania nad "testem kur."* (Further investigations of the "hen test.") *Polsk. Arch. Psychol.*, 1936/37, 9, 103-109.—Problem boys were investigated with the aid of a story relating how two boys tortured some hens for sport. The reactions of the children to the "hen test" were analyzed; and the results attained were compared with *Schneckenburger's* results, as described in his work *Die Altersentwicklung und Milieubedingtheit des sozialemischen Verständnisses beim proletarischen Kinde* (*Z. angew. Psychol.*, 1932, 42-43).—*S. Blachowski* (Poznań).

4427. **Kurzawski, S.** *Popularność gier i zabaw wśród młodzieży gimnazjalnej, w uzależnieniu od właściwości fizycznych, sprawowania i postępów w nauce.* (The popularity of games and amusements among gymnasium pupils, compared with their physical characteristics, their conduct, and their school progress.) *Prace psychol.*, 1938, 1, 221-248.—Basing his study on investigations conducted in one of the provincial Polish gymnasiums, the author determined the popularity of games and amusements, as depending on the age, growth, strength, constitutional type, racial type, progress in studies, and conduct of the pupils.—*S. Blachowski* (Poznań).

4428. **Lark-Horovitz, B.** *On art appreciation of children: II. Portrait preference study.* *J. educ. Res.*, 1938, 31, 572-598.—An attempt to determine whether preferences for single portraits were present at different age levels. The subjects were 523 children aged 6 to 15, of whom 44 were artistically gifted children, aged 12 to 15. There was an almost equal division of boys and girls. From 261 pictures 51 were selected for the younger children and 43 for the older ones. A statistical treatment of the results indicates a preference for 2-6 pictures which received over half the votes. Boys in general select almost exclusively men's pictures, while girls prefer women's and children's pictures. Results from a questionnaire indicate that these choices have a basis in interest. Younger boys preferred pictures representing Indians and soldiers, while older boys chose pictures with strong features. Girls at all ages follow their feminine ideals. Color seems to be of secondary significance, but the choice of the older group is influenced by the technique of the portrait. The artistically gifted group do not materially differ from the average group.—*S. W. Fernberger* (Pennsylvania).

4429. **Leach, J. M.** *Play groups as a treatment process in a family agency.* *Family*, 1938, 18, 342-346.—*R. R. Willoughby* (Brown).

4430. **Morgenstern, S.** *Über das Traum- und Phantasieleben des Kindes.* (The child's dream world and imaginary world.) *Z. psychoanal. Pädag.*, 1937, 11, 181-211.—Dreams fulfill the same function in the life of the child as do his play activities and his

daydreams, namely, they permit him to take revenge on his real and imaginary enemies, to satisfy his ambitions, and to exercise self-castigation. The child's entire personality is reflected in his dreams, though it is often necessary to be thoroughly familiar with his emotional and family life in order to interpret the manifest dream content in terms of the repressed real meanings. This repression seldom is as successful and complete in childhood as in later years, and symbols are usually taken from fairy tales, biblical stories, or everyday life. When a higher degree of sublimation is attained, creative expressions often assume a pictorial or literary form. As such, they frequently serve to facilitate the child's affective adjustment and thus afford an insight into the motives controlling artistic creations in adult life.—*H. Beaumont* (Kentucky).

4431. **Mowrer, O. H., & Mowrer, W. M.** *The meaning and management of crying.* *Child Study*, 1938, 15, 104-107, 127.—*R. R. Willoughby* (Brown).

4432. **Olson, W. C.** *General methods: case study.* *Yearb. nat. Soc. Stud. Educ.*, 1938, 37, Part II, 329-332.—The case study technique is the most scientific method known for the consideration of the prediction and control of the growth of the behavior of an individual. The interview is an important step in this process. Some of the criticisms of the case-study approach concern the difficulty of obtaining valid and reliable historical material and the proliferation of diagnostic and treatment theories lacking scientific verification. "The case study in relation to education is a method with a respectable past and a promising future."—*P. S. de Q. Cabot* (Simmons).

4433. **Pauls, T.** *Die Notlüge als Gegenstand des Unterrichts.* (The necessary lie as a subject of instruction.) *Z. ReligPsychol.*, 1937, 10, 193-212.—"Schoolboys were made acquainted with the conflict of duties, as it exists between the duty of truth and the duty of love, which may necessitate the concealment of truth, by being told the story of the theater manager, who got safely away the visitors from his burning theater by explaining that the star had fallen ill and that for this reason the performance had to be postponed. When the children rendered that tale in their written exercises, they stressed on the average the claims of life. Besides they were inclined to give preference to the duty of love. Sometimes the problem of sin or guilt is pointed out, which is by no means disposed of by the unavoidable conflict of duty."—*P. L. Krieger* (Leipzig).

4434. **Peiper, A.** *Die Erscheinung der Dominanz und die Erregungsstufen des Saugzentrums.* (The phenomenon of dominance and the stages of excitability of the sucking center.) *Jb. Kinderheilk.*, 1937, 149, 201-206.—The nervous center controlling the sucking movements of infants is intimately bound up with the center for breathing. Because of this association the sucking movements soon take on a rhythmic character, coinciding with the breathing movements, and this rhythm is more apparent toward the end of the feeding period than it is at the beginning. If the nipple (breast or bottle) be with-

drawn from the child's mouth toward the end of the feeding period and the child then be stimulated through some other sensory avenue, as by the sound of a bell or by stroking the sole of the foot, the rhythmic sucking movements will be resumed. The relation of this phenomenon to the conditioned reflex is discussed.—*F. L. Goodenough* (Minnesota).

4435. **Peiper, A.** *Die Erscheinung der Dominanz bei Reizlöschung.* (The demonstration of dominance through the withdrawal of stimulation.) *Jb. Kinderheilk.*, 1938, 151, 1-2.—The presence of cerebral dominance in a young infant can be tested by the withdrawal of a stimulus (such as the nipple) to which a child is actively responding and, after the response has ceased, interposing another stimulus such as turning out the light or sounding a bell. If dominance exists, the sucking movements will be resumed in response to the second stimulus.—*F. L. Goodenough* (Minnesota).

4436. **Peterson, T. J.** *A preliminary study of the effects of previous nursery school attendance upon five-year-old children entering kindergarten.* *Univ. Ia. Stud. Child Welf.*, 1938, 14, 197-248.—Using the control group technique, junior primary children who had attended preschool (nursery school group) were compared with children who made their initial school enrollment in junior primary (non-nursery school group). The groups were similar as to age, intelligence and socio-economic background. There were 20 children in the nursery school group and 15 in the non-nursery school group. The nursery school group had gained in IQ from the time of entrance to preschool to enrollment in junior primary. Scores in reading readiness, vocabulary, and information indicated little difference between the groups. The nursery school children were more aggressive, independent, and sociable, according to ratings on the Berne scale, and were more mature in social competence according to the Vineland scale.—*B. Wellman* (Iowa).

4437. **Pető, E.** *Säugling und Mutter.* (Infant and mother.) *Z. psychoanal. Pädag.*, 1937, 11, 244-252.—On the basis of his clinical experience, from which examples are cited involving infants from five days to seven months old, the author concludes that even at a very early age (the sixth day of life) libidinal fixations may exist which, if disturbed, result in a refusal to take nourishment. In mild cases this applies only to the breast, in severe cases to all mother milk, and in the most extreme instances to food of any sort. This means that the fate of the narcissistic libido (self-preservation) is intimately dependent on the fluctuations of the object-libido. This is not so surprising in view of the fact that, at this age, both are centralized in the oral zone. It appears, then, that libidinal fixations are essential for the maintenance of life.—*H. Beaumont* (Kentucky).

4438. **Risset, R.** *L'enfance et le chant.* (Childhood and song.) Paris, 1936. Pp. 24.—In songs preferred by children the rhythm was elementary,

gay, animated; melodies were simple. There was a definite age and sex difference.—(Courtesy *Année psychol.*)

4439. **Schröter, H.** *Untersuchungen über die Beziehungen des Entwicklungsgrades nicht ausgetragener Kinder zur Dauer der Tragezeit.* (Investigations on the relationship between the level of development of premature children and the length of the gestation period.) Breslau: Klossok, 1937. Pp. 24.—*R. R. Willoughby* (Brown).

4440. **Simon, T.** *Das Doppelleben des Kindes.* (The double life of the child.) Zürich: Rotapfel, 1937. Pp. 230. S Fr. 6.50 (RM 4.—).—A contribution to the psychology of children's deceptions. The development of deception is traced in concrete situations, beginning with the earliest conflicts and following through to the inevitable consequence of a double morality, one for others and a secret one for the child himself. The challenging question which faces educators is: to what extent are adults responsible for the fact that the child exchanges his naïveté for his double personality? Character deficiencies in the child must be ascribed to the adult, but he may help the child to adjust satisfactorily so that he may not be the victim of his deceptions. Bibliography.—*T. Simon* (Zürich).

4441. **Stogdill, R. M.** *Survey of experiments on children's attitudes towards parents: 1894-1936.* *J. genet. Psychol.*, 1937, 51, 293-303.—This paper includes only those studies in which some measuring device (questionnaire, interview form, or test blank) was employed for recording and scoring responses. For each study included the experimental procedure is described and the results stated. The results of the collected studies are summarized.—*E. Heibredner* (Wellesley).

4442. **Traube, T.** *La valeur diagnostique des dessins des enfants difficiles.* (The diagnostic value of drawings of problem children.) *Arch. Psychol., Genève*, 1937, 26, 285-309.—A group of children from 6 to 14 years of age were asked to draw what they had done the previous Sunday, and it was found that certain traits of an emotional or an intellectual character were revealed. A predominance of geometric forms or the absence of living figures indicated mental retardation. The number of details increased with age. Color played an important role; thus depression was indicated by a neglect of color or by a preference for brown or violet. The contents of the design often possessed symbolic value, viz., the use of bars by a child who had been too strictly brought up. As a check on the theory that these drawings were pathognomonic of certain defects, the author tested a group of normal children, finding that in most instances the pathological characteristics were absent.—*E. Claparède* (Geneva).

[See also abstracts 3859, 3868, 3899, 3937, 3940, 3963, 3969, 3970, 3972, 3978, 4050, 4094, 4110, 4147, 4167, 4197, 4204, 4205, 4220, 4237, 4270, 4279, 4293, 4338, 4349, 4364, 4367.]

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